

New records and revised distribution of tiger beetles in China (Coleoptera, Cicindelidae)

Ke-Yi Wang¹, Fabian A. Boetzl², Jürgen Wiesner³, Cheng-De Li¹

¹ School of Forestry, Northeast Forestry University, Harbin, 150040, China

² Department of Ecology, Swedish University of Agricultural Sciences, Uppsala SE-750 07, Sweden

³ Am Zellberg 6, D-38527 Meine, Germany

Corresponding author: Cheng-De Li (lichengde0608@sina.com)

Abstract

Based on the examination of specimens housed in several scientific collections, we expand the known tiger beetle fauna of China, and eight species are recorded from China for the first time. The occurrence of *Cicindela* (*Cicindela*) *sachalinensis raddei* Morawitz, 1863 in Shanxi Province, and *Neocollyris* (*Neocollyris*) *saphyrina* (Chaudoir, 1850) in China are re-established. We provide distribution maps and habitus photographs of examined specimens for the newly recorded and revised species. We also discuss potential research hotspots for future taxonomic studies of tiger beetles in China.

Key words: China, distribution, new records, taxonomy, tiger beetles



Academic editor: Rikjan Vermeulen

Received: 17 May 2024

Accepted: 17 July 2024

Published: 15 August 2024

ZooBank: <https://zoobank.org/A708ECA5-B91F-4816-A3BD-8F5D52832D54>

Citation: Wang K-Y, Boetzl FA, Wiesner J, Li C-D (2024) New records and revised distribution of tiger beetles in China (Coleoptera, Cicindelidae). ZooKeys 1210: 29–59. <https://doi.org/10.3897/zookeys.1210.127753>

Copyright: © Ke-Yi Wang et al.

This is an open access article distributed under terms of the Creative Commons Attribution License (Attribution 4.0 International – CC BY 4.0).

Introduction

Tiger beetles (Coleoptera, Cicindelidae) are a globally distributed family that occupies almost all terrestrial ecosystems (Pearson and Vogler 2001). More than 2,850 species are currently known to science (Wiesner 2020), of which the richest diversity is found in the Oriental realm (Cassola and Pearson 2000; Pearson and Wiesner 2023). China spans both the Palearctic and Oriental realms, with significant climatic differences both between north and south as well as between west and east. In addition, altitudinal zones should be also considered. It features numerous examples of biogeographic isolation that can facilitate speciation. These biogeographic barriers include the Qinling Mountains–Huaihe River, Hengduan Mountains, Tianshan Mountains, Greater Khingan Mountains, Nanling Mountains, and so on. As a result, China has a unique and rich tiger beetle fauna, representing a mixture of Palearctic and Oriental species together with a high degree of endemism (Li et al. 2012).

There has been limited research on the overall distribution of tiger beetles in China (Shook and Wiesner 2006; Wu and Shook 2007; Wu 2011; Aston 2016, 2018). The distribution data that have been available was primarily sourced from publications, private specimen collections, and local museums. Consequently, the known distributional ranges of some species in China are patchy and the actual ranges of these species may extend far beyond the existing records.

This article summarizes data from tiger beetle specimens in several universities and research institutes across China, along with those collected by the corresponding author’s research team. Through these specimens, we update and expand the known distribution of some species of tiger beetle throughout China. Some provinces included here have lacked new records of tiger beetles for many years. The results expand our understanding of the tiger beetle fauna of China.

Materials and methods

In addition to these specimen data, other records were extracted from Wiesner (2020) and Lorenz (2021).

Photographs of the habitus of specimens were taken with a Canon EOS M6 Mark II. A Godox TT350c Flash was used as a light source. Helicon Focus v. 7 was used for image stacking and all images were further processed in Adobe Photoshop CS6.

The specimens reported below are deposited in the following collections:

- EMCAU** Entomological Museum of China Agricultural University, Beijing, China
- IZCAS** Institute of Zoology, Chinese Academy of Sciences, Beijing, China
- KIZCAS** Kunming Institute of Zoology, Chinese Academy of Sciences, Kunming, China
- NEFU** Northeast Forestry University, Harbin, China

Distribution maps were generated using ArcGIS v. 10.2. Map data were sourced online from <http://xzqh.mca.gov.cn/map> (Fig. 1). The English translations of Chinese provinces and regions were partially extracted from

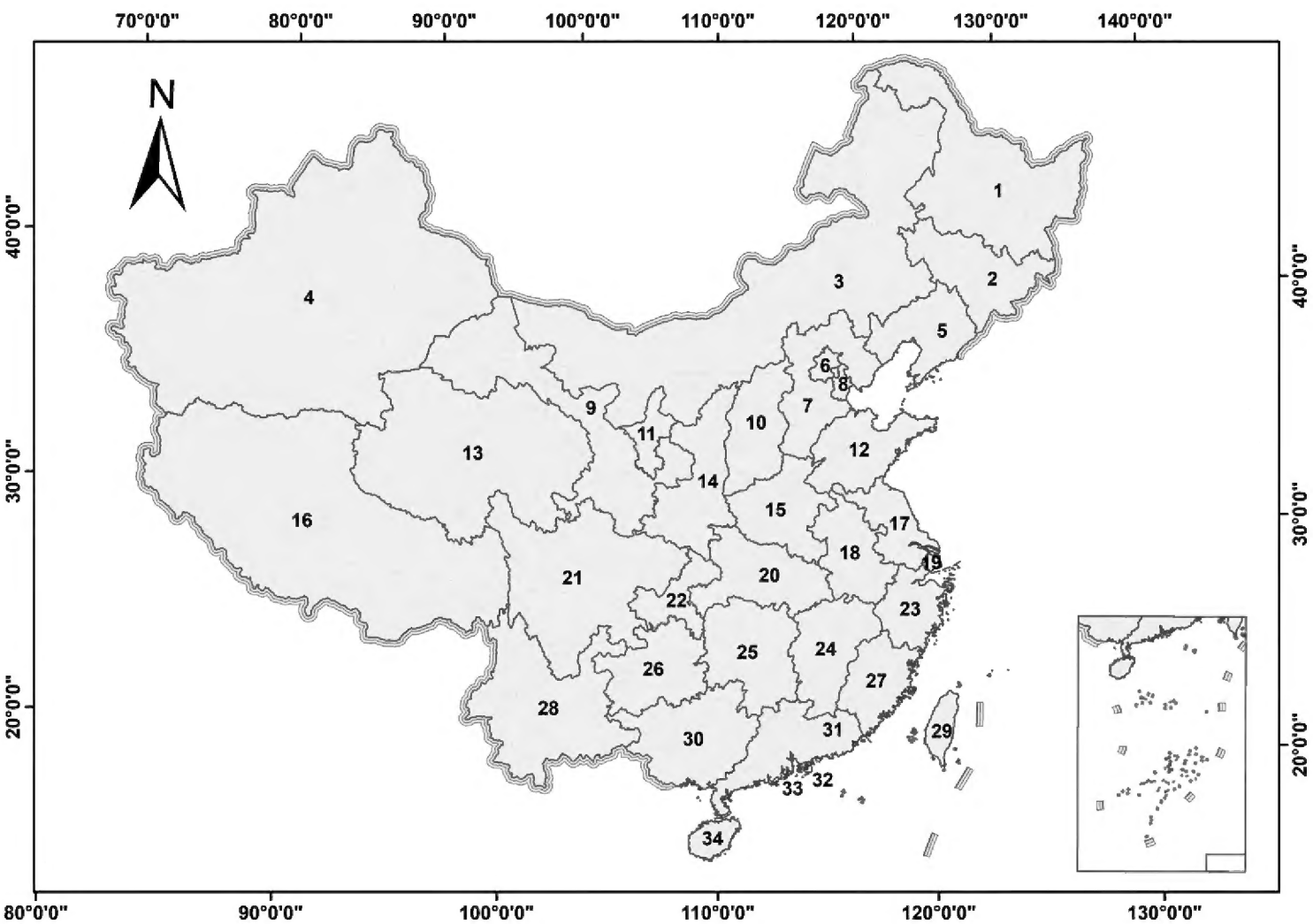


Figure 1. Map of the 34 provinces, autonomous regions, and municipalities of China (see Table 1).

Table 1. Provinces, autonomous regions, and municipalities of China.

1.	Heilongjiang	2.	Jilin
3.	Inner Mongolia	4.	Xinjiang
5.	Liaoning	6.	Beijing
7.	Hebei	8.	Tianjin
9.	Gansu	10.	Shanxi
11.	Ningxia	12.	Shandong
13.	Qinghai	14.	Shaanxi
15.	Henan	16.	Xizang
17.	Jiangsu	18.	Anhui
19.	Shanghai	20.	Hubei
21.	Sichuan	22.	Chongqing
23.	Zhejiang	24.	Jiangxi
25.	Hunan	26.	Guizhou
27.	Fujian	28.	Yunnan
29.	Taiwan	30.	Guangxi
31.	Guangdong	32.	Hong Kong
33.	Macao	34.	Hainan

<https://www.stats.gov.cn/sj/ndsj/2023/indexeh.htm> (Table 1). Distribution maps of species were processed using Adobe Photoshop CS6.

Taxonomy

Family Cicindelidae Latreille, 1802
Tribe Cicindelini Latreille, 1802
Subtribe Cicindelina Latreille, 1802
Genus *Abroscelis* Hope, 1838

***Abroscelis anchoralis anchoralis* (Chevrolat, 1845)**
Figs 2A, 3A

Cicindela anchoralis: Chevrolat 1845: 7.
Abroscelis anchoralis anchoralis: Lin and Ho 2007: 180; Shook and Wiesner 2006: 7; Wu 2011: 23.

Published data. Liaoning (Shook and Wiesner 2006: 7; Wu 2011: 23), Beijing (Shook and Wiesner 2006: 7; Wu 2011: 23), Hebei (Shook and Wiesner 2006: 7), Shandong (Shook and Wiesner 2006: 7; Wu 2011: 23), Zhejiang (Shook and Wiesner 2006: 7; Wu 2011: 23), Hainan (Lin and Ho 2007: 180), Hong Kong (Shook and Wiesner 2006: 7; Wu 2011: 23), Macao (Chevrolat 1845: 7; Shook and Wiesner 2006: 7; Wu 2011: 23), Taiwan (Lin and Ho 2007: 180).
New records. Guangdong, Zhanjiang, Min'an Town, 20°57'28"N, 110°15'6"E, 1 m, leg. H.B. Liang and X.L. Huang, 28.vi.2014, 1 male (IZCAS).
Distribution. China (Guangdong, Liaoning, Beijing, Hebei, Shandong, ?Jiangsu, Zhejiang, ?Fujian, Hainan, Hong Kong, Macao, Taiwan).
Remarks. New provincial record for Guangdong.

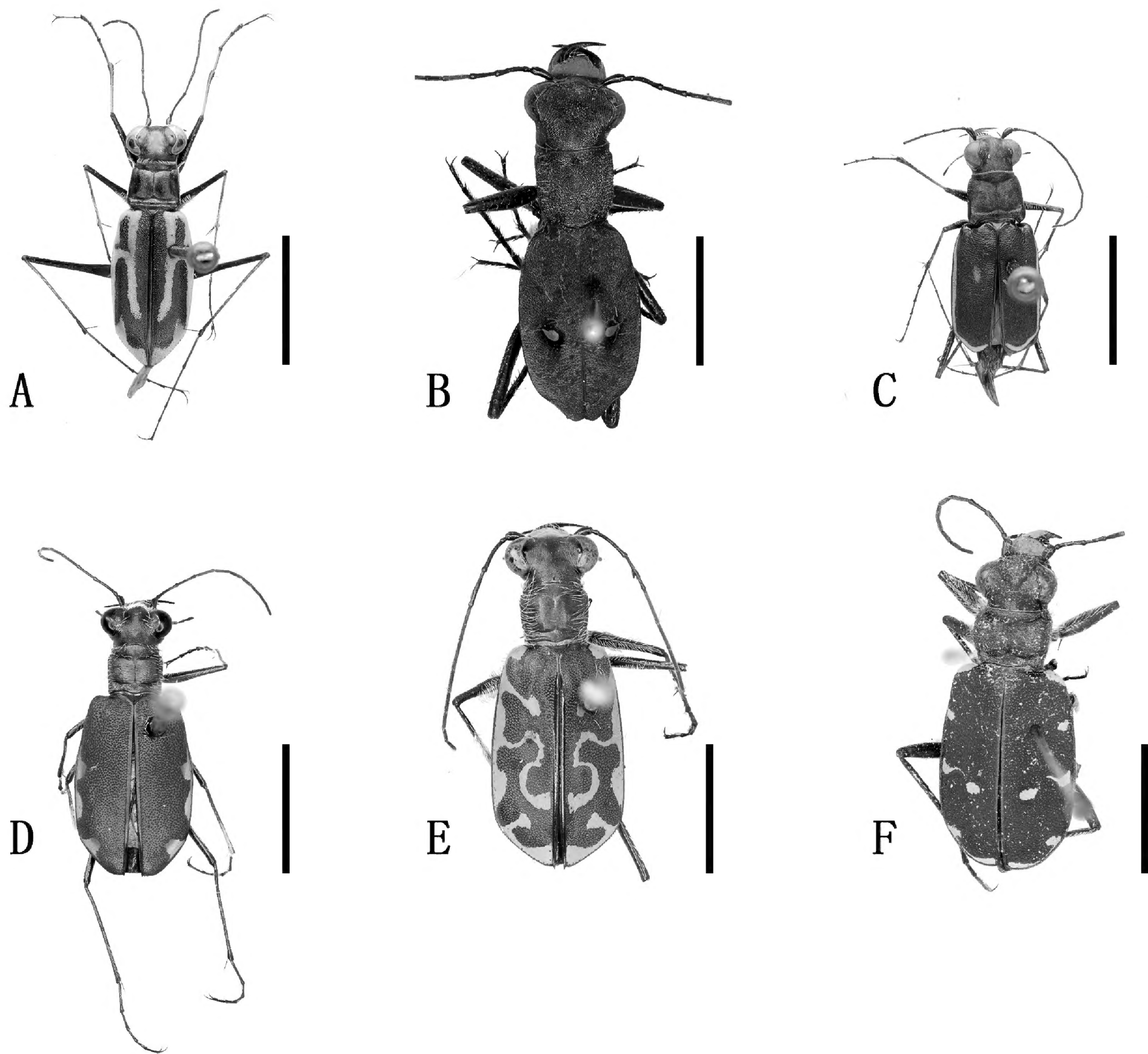


Figure 2. Habitus photographs **A** *Abroscelis anchoralis anchoralis* (Chevrolat, 1845) **B** *Apterodela (Apterodela) bivirgulata bivirgulata* (Fairmaire, 1889) **C** *Callytron nivicinatum* (Chevrolat, 1845) **D** *Calomera chloris* (Hope, 1831) **E** *Calomera plumigera scoliographa* (Rivalier, 1953) **F** *Cicindela (Cicindela) campestris pontica* Fischer, 1828. Scale bars: 5 mm.

Genus *Apterodela* Rivalier, 1950
Subgenus *Apterodela* Rivalier, 1950

***Apterodela (Apterodela) bivirgulata bivirgulata* (Fairmaire, 1889)**
Figs 2B, 3B

Cicindela bivirgulata: Fairmaire 1889: 5.
Cylindera (Apterodela) lobipennis: Shook and Wiesner 2006: 13; Wu 2011: 26.
Apterodela (Apterodela) bivirgulata: Matalin et al. 2024: 311.

Published data. Shandong (Matalin et al. 2024: 311), Henan (Matalin et al. 2024: 311), Hubei (Matalin et al. 2024: 311), Anhui (Matalin et al. 2024: 311), Jiangxi (Matalin et al. 2024: 311), Jiangsu (Matalin et al. 2024: 311), Shang-

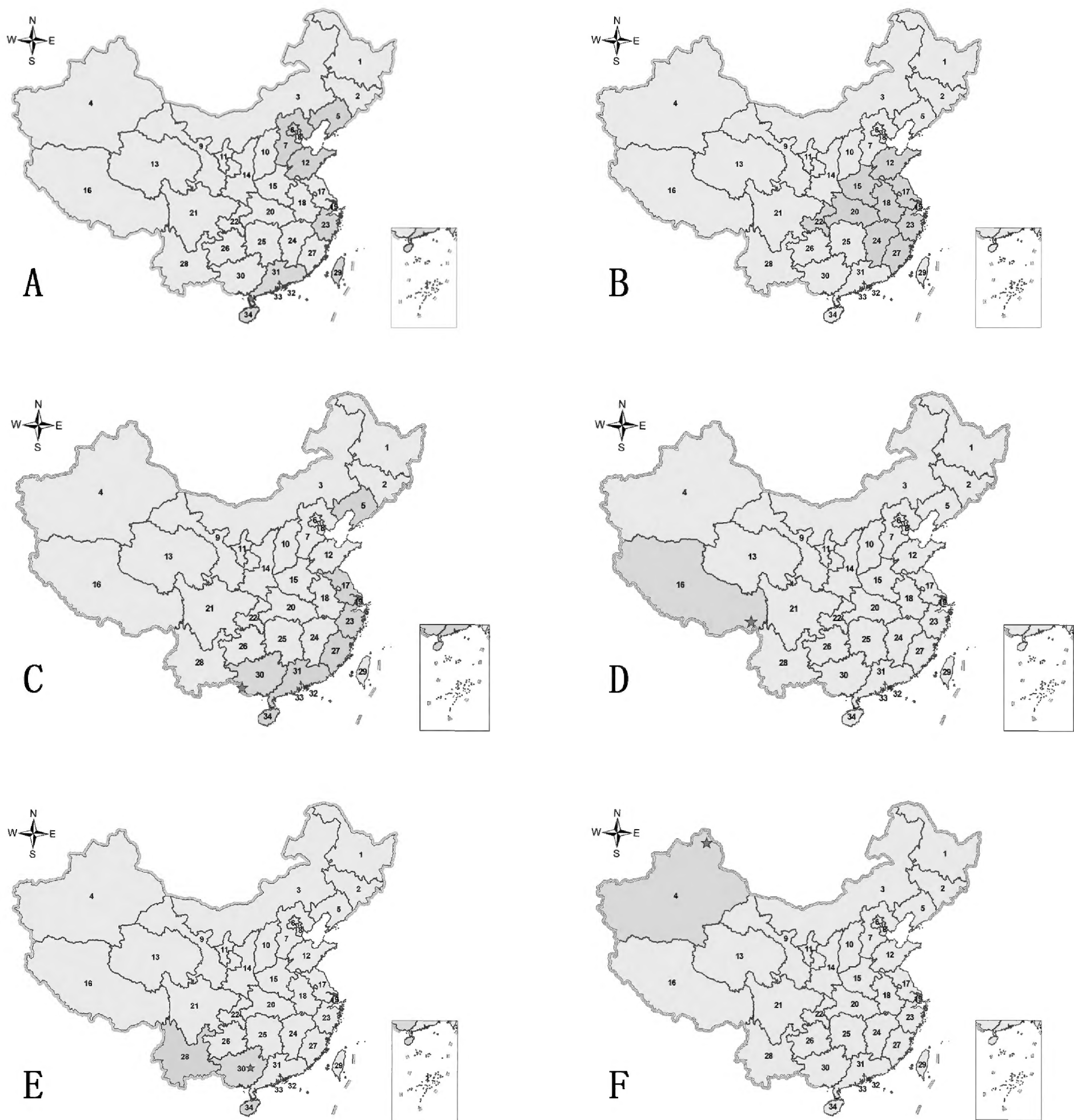


Figure 3. Distribution maps. Green indicates records with previously known distribution based on published data, blue indicates new records, red stars indicate the collection sites of the examined specimens **A** *Abroscelis anchoralis anchoralis* (Chevrolat, 1845) **B** *Apterodela (Apterodela) bivirgulata bivirgulata* (Fairmaire, 1889) **C** *Callytron nivicinatum* (Chevrolat, 1845) **D** *Calomera chloris* (Hope, 1831) **E** *Calomera plumigera scoliographa* (Rivalier, 1953) **F** *Cicindela (Cicindela) campestris pontica* Fischer, 1828.

hai (Matalin et al. 2024: 311), Chongqing (Matalin et al. 2024: 311), Zhejiang (Matalin et al. 2024: 311), Fujian (Matalin et al. 2024: 311).

Records. Jiangsu, leg. unknown, 18.iv.1923, 1 male (IZCAS).

Distribution. China (Shandong, Henan, Hubei, Anhui, Jiangxi, Jiangsu, Shanghai, Chongqing, Zhejiang, Fujian).

Remarks. Additional specimens contribute to a better understanding of the distribution and a more robust identification of *A. (A.) b. bivirgulata*.

Genus *Callytron* Gistel, 1848

Callytron nivicinatum (Chevrolat, 1845)

Figs 2C, 3C

Cicindela nivicinata: Chevrolat 1845: 98.

Callytron nivicinatum: Shook and Wiesner 2006: 8; Wu 2011: 23; Wiesner et al. 2017: 68.

Published data. Liaoning (Wu 2011: 23; Wiesner et al. 2017: 68), Jiangsu (Shook and Wiesner 2006: 8; Wu 2011: 23; Wiesner et al. 2017: 68), Zhejiang (Shook and Wiesner 2006: 8; Wu 2011: 23; Wiesner et al. 2017: 68), Shanghai (Shook and Wiesner 2006: 8; Wu 2011: 23; Wiesner et al. 2017: 68), Fujian (Shook and Wiesner 2006: 8; Wu 2011: 23; Wiesner et al. 2017: 68), Guangdong (Shook and Wiesner 2006: 8; Wu 2011: 23; Wiesner et al. 2017: 68), Hainan (Shook and Wiesner 2006: 8; Wu 2011: 23; Wiesner et al. 2017: 68), Hong Kong (Shook and Wiesner 2006: 8; Wu 2011: 23; Wiesner et al. 2017: 68), Macao (Shook and Wiesner 2006: 8; Wu 2011: 23; Wiesner et al. 2017: 68).

New records. Guangxi, Longzhou, Mount Daqing, leg. J.K. Yang, 15.v.1963, 1 female (EMCAU).

Distribution. China (Guangxi, Liaoning, Jiangsu, Zhejiang, Shanghai, Fujian, Guangdong, Hainan, Hong Kong, Macao), South Korea, Japan, Cambodia, Vietnam.

Remarks. New provincial record for Guangxi.

Genus *Calomera* Motschulsky, 1862

Calomera chloris (Hope, 1831)

Figs 2D, 3D

Cicindela chloris: Hope 1831: 21.

New records. Xizang, Linzhi, Xiachayu, 28°29'59"N, 97°1'3"E, leg. J. Wu, 28.vii.2014, 1 female (IZCAS); Xizang, Bomi, Tongmai, 2250 m, leg. unknown, 31.viii.2005, 1 female (IZCAS).

Distribution. China (Xizang), Afghanistan, Pakistan, Nepal, Bhutan, India, Laos.

Remarks. New state record for China and new provincial record for Xizang.

Calomera plumigera scoliographa (Rivalier, 1953)

Figs 2E, 3E

Calomera plumigera scoliographa: Shook and Wiesner 2006: 9; Shook and Wu 2006: 39; Wu 2011: 24.

Published data. Yunnan (Shook and Wiesner 2006: 9; Shook and Wu 2006: 39; Wu 2011: 24), Hainan (Shook and Wiesner 2006: 9; Wu 2011: 24).

New records. Guangxi, Jinxiu, Dazhang, leg. unknown, ?.v.1976, 1 male (IZCAS).

Distribution. China (Guangxi, Yunnan, Hainan), Vietnam, Laos, Cambodia, Malaysia, Thailand.

Remarks. New provincial record for Guangxi.

Genus *Cicindela* Linnaeus, 1758

Subgenus *Cicindela* Linnaeus, 1758

***Cicindela (Cicindela) campestris pontica* Fischer, 1828**

Figs 2F, 3F

Cicindela campestris pontica: Gebert et al. 2021: 473.

New records. Xinjiang, Altai, Forest Region of Ashan Forest Management Bureau, leg. unknown, v.1981, 1 female (IZCAS).

Distribution. China (Xinjiang), Ukraine, Bulgaria, Turkey, Georgia, Azerbaijan, Kazakhstan, Russia.

Remarks. New state record for China and new provincial record for Xinjiang.

***Cicindela (Cicindela) sachalinensis raddei* Morawitz, 1863**

Figs 4A, 5A

Cicindela raddei: Morawitz 1863: 237, 238.

Cicindela sachalinensis: Yu and Wang 2017:145; Di and Ren 2021: 146.

Cicindela sachalinensis raddei: Mandl 1981: 27.

Cicindela (Cicindela) sachalinensis raddei: Shook and Wiesner 2006: 11; Wu 2011: 25.

Published data. Heilongjiang (Shook and Wiesner 2006: 11; Wu 2011: 25), Gansu (Shook and Wiesner 2006: 11; Wu 2011: 25), Beijing (Huairou) (Yu and Wang 2017: 145), Hebei (Mount Xiaowutai) (Di and Ren 2021: 146), Qinghai (Shook and Wiesner 2006: 11; Wu 2011: 25), Shanxi (Wutaishan) (Mandl 1981: 27), Hubei (Shook and Wiesner 2006: 11; Wu 2011: 25), Sichuan (Shook and Wiesner 2006: 11; Wu 2011: 25).

Records. Shanxi, Mount Wutai, Dongtai, 2400 m, leg. T.S. Li, 13.vi.1964, 1 female (IZCAS).

Distribution. China (Shanxi, Heilongjiang, Gansu, Qinghai, Beijing, Hebei, Hubei, Sichuan), Russia, Mongolia.

Remarks. Mandl (1981) reported *C. (C.) s. raddei* from Chunshantu, Mount Wutai, Shanxi. This record was not accepted in previous checklists. We restore the provincial record of *C. (C.) s. raddei* for Shanxi.

***Cicindela (Cicindela) transbaicalica hamifasciata* Kolbe, 1886**

Figs 4B, 5B

Cicindela japonensis hamifasciata: Kolbe 1886: 170.

Cicindela hybrida transbaicalica: Wang et al. 2012: 15.

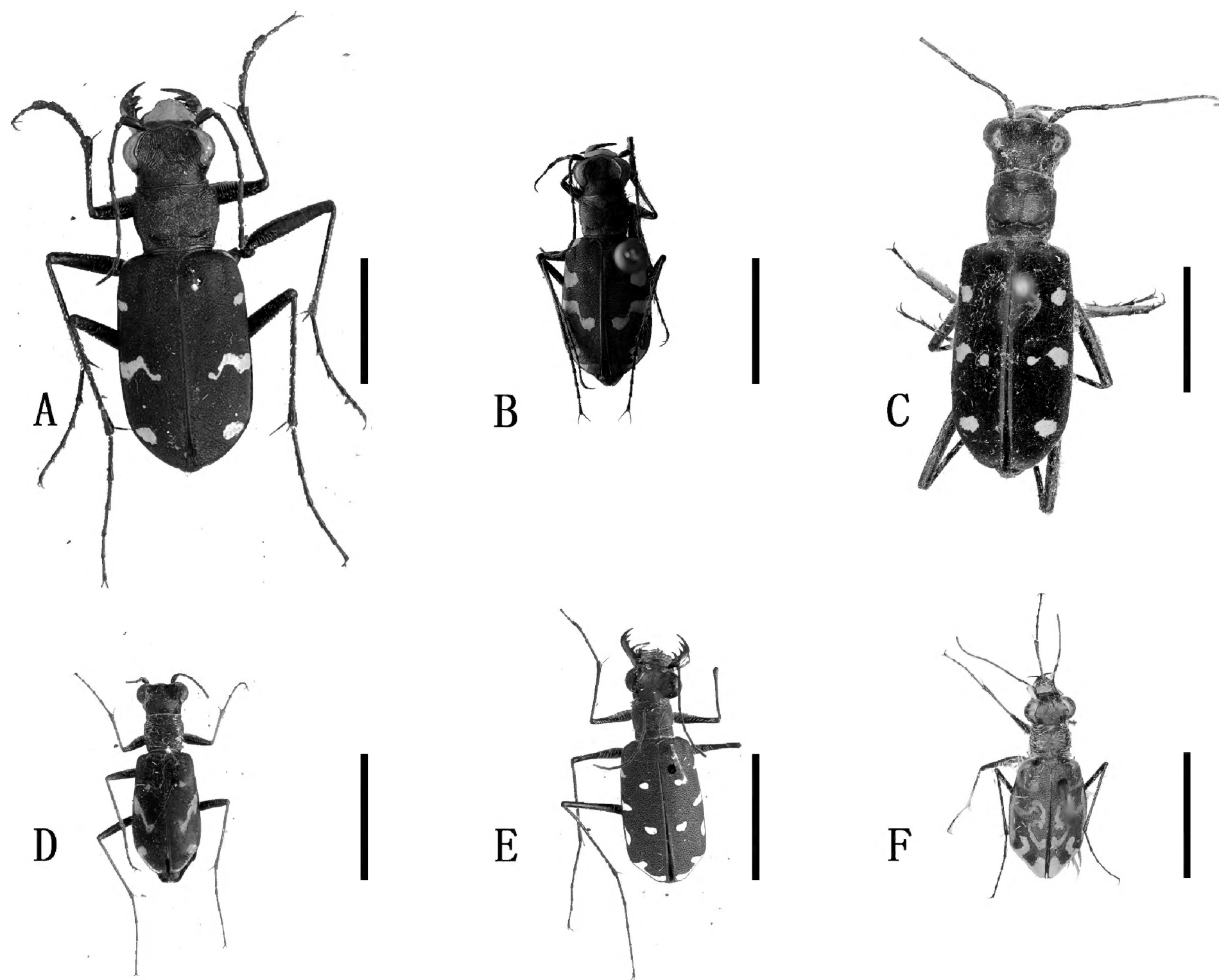


Figure 4. Habitus photographs **A** *Cicindela* (*Cicindela*) *sachalinensis raddei* Morawitz, 1863 **B** *Cicindela* (*Cicindela*) *transbaicalica hamifasciata* Kolbe, 1886 **C** *Cosmodela separata* (Fleutiaux, 1893) **D** *Cylindera* (*Cylindera*) *obliquefasciata* (Adams, 1817) **E** *Cylindera* (*Eriodera*) *albopunctata* (Chaudoir, 1852) **F** *Cylindera* (*Eugrapha*) *contorta contorta* (Fischer, 1828). Scale bars: 5 mm.

Cicindela (*Cicindela*) *transbaicalica hamifasciata*: Shook and Wiesner 2006: 11; Wu 2011: 25.

Published data. Heilongjiang (Wu 2011: 25), Jilin (Wu 2011: 25), Inner Mongolia (Wu 2011: 25), Liaoning (Wu 2011: 25; Wang et al. 2012: 15), Gansu (Shook and Wiesner 2006: 11; Wu 2011: 25), Xinjiang (Wu 2011: 25), Shaanxi (Shook and Wiesner 2006: 11; Wu 2011: 25), Shanxi (Wu 2011: 25), Anhui (Wu 2011: 25), Henan (Shook and Wiesner 2006: 11; Wu 2011: 25), Hebei (Shook and Wiesner 2006: 11; Wu 2011: 25), Hubei (Wu 2011: 25), Jiangsu (Wu 2011: 25), Shandong (Shook and Wiesner 2006: 11; Wu 2011: 25), Sichuan (Shook and Wiesner 2006: 11; Wu 2011: 25), Qinghai (Shook and Wiesner 2006: 11; Wu 2011: 25), Fujian (Shook and Wiesner 2006: 11; Wu 2011: 25), Guangdong (Wu 2011: 25), Zhejiang (Wu 2011: 25), ? Yunnan (Wu 2011: 25).

New records. Beijing, Shunyi, leg. unknown, 13.v.1964, 2 males, 3 females (EMCAU); Jilin, Songhua River, Wukeshu, 44°27'43"N, 126°49'33"E, 200 m, leg. Y. Liu, 1.vi.2009, 1 male (IZCAS); Inner Mongolia, Chifeng, day collecting, leg. Y.

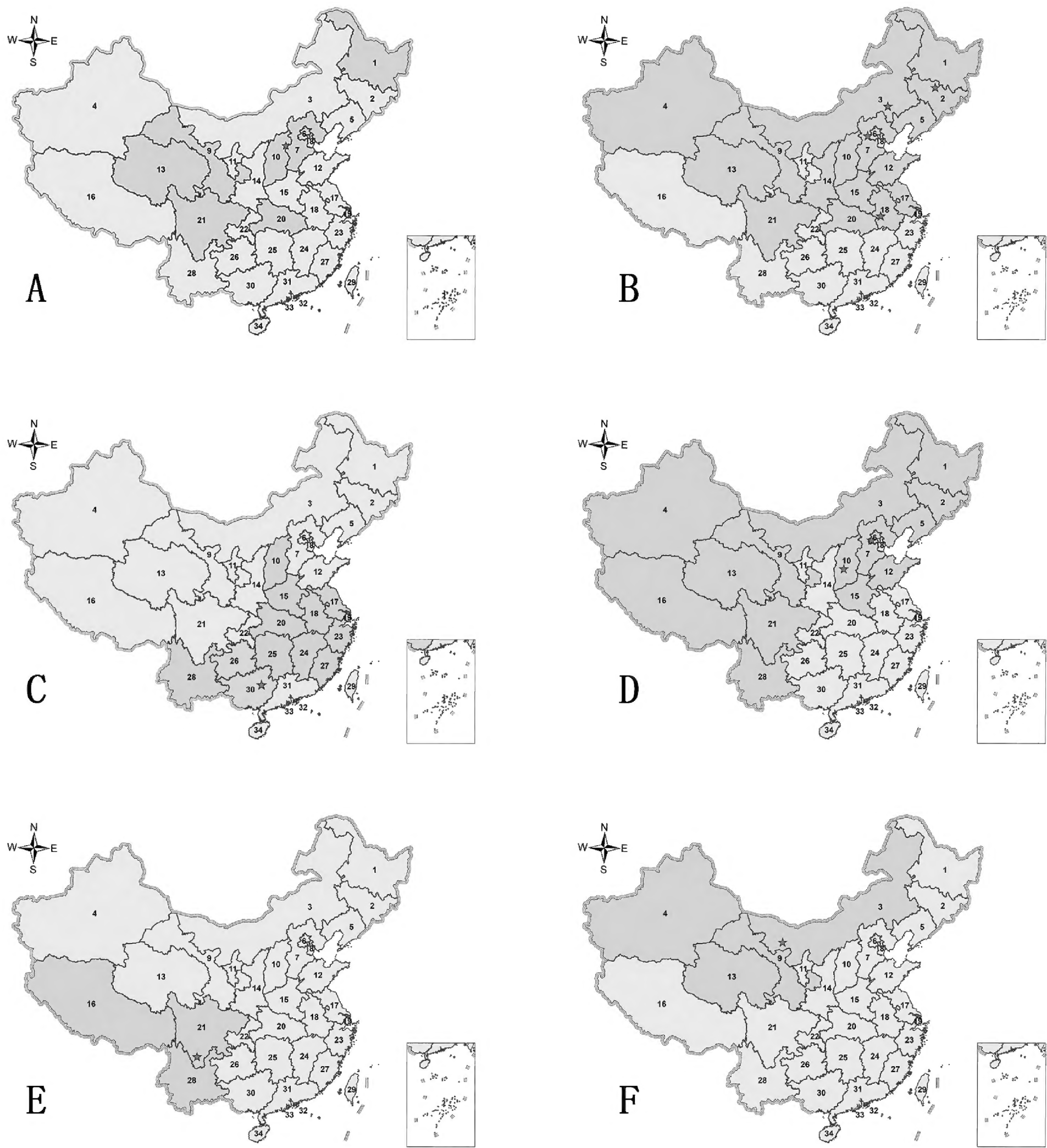


Figure 5. Distribution maps. Green indicates records with previously known distribution based on published data, blue indicates new records, red stars indicate the collection sites of the examined specimens **A** *Cicindela (Cicindela) sachalinensis raddei* Morawitz, 1863 **B** *Cicindela (Cicindela) transbaicalica hamifasciata* Kolbe, 1886 **C** *Cosmodela separata* (Fleutiaux, 1893) **D** *Cylindera (Cylindera) obliquefasciata* (Adams, 1817) **E** *Cylindera (Eriodera) albopunctata* (Chaudoir, 1852) **F** *Cylindera (Eugrapha) contorta contorta* (Fischer, 1828).

Wang and S.Y. Geng, 26–30.vii. 2009, 1 female (NEFU); Anhui, Yuexi, Yaoluoping, 30°59'01"N, 116°05'10", 1178 m, leg. unknown, 17.v.2021, 1 female (IZCAS).

Distribution. China (Beijing, Heilongjiang, Jilin, Inner Mongolia, Liaoning, Gansu, Xinjiang, Shaanxi, Shanxi, Anhui, Henan, Hebei, Hubei, Jiangsu, Shandong, Sichuan, Qinghai, ?Fujian, ?Guangdong, ?Zhejiang, ?Yunnan), North Korea, South Korea, Russia.

Remarks. New provincial record for Beijing. Wu (2011) expanded the known distribution of *C. (C.) t. hamifasciata* Kolbe, 1886 in China by reviewing the Chinese literature, but Wu did not provide specimen data. We provide specimen data for this species from Jilin, Inner Mongolia and Anhui for the first time. Since *C. (C.) t. hamifasciata* Kolbe, 1886 is a typical Eastern Palearctic species, we believe previous records from Fujian, Zhejiang, Guangdong, and Yunnan require further confirmation.

Genus *Cosmodela* Rivalier, 1961

Cosmodela separata (Fleutiaux, 1893)

Figs 4C, 5C

Cicindela separata: Fleutiaux 1893: 491.

Cosmodela separata: Shook and Wiesner 2006: 13; Wu 2011: 26; Wiesner et al. 2017: 53; Tu et al. 2020: 68.

Published data. Shanxi (Shook and Wiesner 2006: 13; Wu 2011: 26; Wiesner et al. 2017: 53), Jiangsu (Shook and Wiesner 2006: 13; Wu 2011: 26; Wiesner et al. 2017: 53), Shanghai (Fleutiaux 1893: 491; Shook and Wiesner 2006: 13; Wu 2011: 26; Wiesner et al. 2017: 53), Zhejiang (Fleutiaux 1893: 491; Shook and Wiesner 2006: 13; Wu 2011: 26; Wiesner et al. 2017: 53), Henan (Shook and Wiesner 2006: 13; Wu 2011: 26; Wiesner et al. 2017: 53), Anhui (Shook and Wiesner 2006: 13; Wu 2011: 26; Wiesner et al. 2017: 53), Hubei (Wu 2011: 26; Wiesner et al. 2017: 53), Hunan (Wu 2011: 26; Wiesner et al. 2017: 53), Jiangxi (Tu et al. 2020: 68), Fujian (Shook and Wiesner 2006: 13; Wu 2011: 26; Wiesner et al. 2017: 53), Yunnan (Shook and Wiesner 2006: 13; Wu 2011: 26; Wiesner et al. 2017: 53).

New records. Guangxi, Jinxiu, Tongmu Town, leg. J.C. Huang, 4.vii.1981, 2 females (IZCAS); Guizhou, Shiqian, Mount Foding, 750 m, leg. X.K. Yang, 24.XI.1988, 1 female (IZCAS).

Distribution. China (Guangxi, Guizhou, Shanxi, Jiangsu, Shanghai, Zhejiang, Henan, Anhui, Hubei, Hunan, Jiangxi, Fujian, Yunnan), Vietnam.

Remarks. New provincial records for Guangxi and Guizhou.

Genus *Cylindera* Westwood, 1831

Subgenus *Cylindera* Westwood, 1831

Cylindera (Cylindera) obliquefasciata (Adams, 1817)

Figs 4D, 5D

Cicindela obliquefasciata: Adams 1817: 280.

Cylindera (Cylindera) obliquefasciata obliquefasciata: Shook and Wiesner 2006: 14; Wu 2011: 27.

Published data. Heilongjiang (Shook and Wiesner 2006: 14; Wu 2011: 27), Jilin (Wu 2011: 27), Inner Mongolia (Shook and Wiesner 2006: 14; Wu 2011: 27), Liaoning (Wu 2011: 27), Beijing (Wu 2011: 27), Hebei (Shook and Wiesner 2006: 14; Wu 2011: 27), Gansu (Shook and Wiesner 2006: 14; Wu 2011: 27), Qinghai

(Shook and Wiesner 2006: 14; Wu 2011: 27), Xinjiang (Shook and Wiesner 2006: 14; Wu 2011: 27), Shanxi (Wu 2011: 27), Shandong (Shook and Wiesner 2006: 14; Wu 2011: 27), Henan (Shook and Wiesner 2006: 14; Wu 2011: 27).

Records. Beijing, Haidian, Fragrant Hills Park, leg. unknown, 16.vii.1962, 2 males, 3 females (EMCAU); Shanxi, Taiyuan, Qingxu, leg. unknown, 20.vi.1960, 1 male (EMCAU).

Distribution. China (Heilongjiang, Jilin, Inner Mongolia, Liaoning, Beijing, Hebei, Gansu, Qinghai, Xinjiang, Shanxi, Shandong, Henan), Russia.

Remarks. Wu (2011) reported *C. (C.) obliquefasciata* (Adams, 1817) from Beijing and Shanxi but did not provide specific specimen data. We provide specimen data for this species from Beijing and Sichuan for the first time.

Subgenus *Eriodera* Rivalier, 1961

Cylindera (Eriodera) albopunctata (Chaudoir, 1852)

Figs 4E, 5E

Cicindela albopunctata: Chaudoir 1852: 10.

Cylindera (Eriodera) albopunctata: Shook and Wiesner 2006: 14.

Published data. Sichuan (Wu 2011: 27), Yunnan (Shook and Wiesner 2006: 14; Wu 2011: 27), Xizang (Shook and Wiesner 2006: 14; Wu 2011: 27).

Records. Sichuan, Yanyuan, Jinhe, 1200 m, leg. D.J. Liu, 29.vi.1984, 1 female (IZCAS).

Distribution. China (Sichuan, Yunnan, Xizang), Pakistan, Nepal, Bhutan, India, Vietnam.

Remarks. Wu (2011) reported *C. (E.) albopunctata* (Chaudoir, 1852) from Sichuan but did not provide specific specimen data. We provide specimen data for this species from Sichuan for the first time.

Subgenus *Eugrapha* Rivalier, 1950

Cylindera (Eugrapha) contorta contorta (Fischer, 1828)

Figs 4F, 5F

Cylindera (Eugrapha) contorta contorta: Shook and Wiesner 2006: 14.

Published data. Gansu (Li and Chen 1993; Shook and Wiesner 2006: 14; Wu 2011: 27), Qinghai (Li and Chen 1993; Shook and Wiesner 2006: 14; Wu 2011: 27), Xinjiang (Li and Chen 1993; Shook and Wiesner 2006: 14; Wu 2011: 27), Inner Mongolia (Wu 2011: 27).

Records. Inner Mongolia, Alxa League, Alxa Right Banner, leg. Y.C. Lv, 12.vii.1986, 1 male, 1 female (IZCAS).

Distribution. China (Inner Mongolia, Gansu, Qinghai, Xinjiang), Ukraine, Romania, Moldova, Iran, Georgia, Azerbaijan, Kazakhstan, Uzbekistan, Turkmenistan, Tadzhikistan, Afghanistan, Russia, Mongolia.

Remarks. Wu (2011) reported *C. (E.) c. contorta* (Fischer, 1828) from Inner Mongolia but did not provide specific specimen data. We provide specimen data for this species from Inner Mongolia for the first time.

***Cylindera (Eugrapha) elisae elisae* (Motschulsky, 1859)**

Figs 6A, 7A

Cicindela elisae: Motschulsky 1859: 487; Wang et al. 2012: 16.

Cylindera (Eugrapha) elisae elisae: Shook and Wiesner 2006: 15; Wu 2011: 27; Bai 2016: 29.

Published data. Heilongjiang (Wu 2011: 27), Jilin (Wu 2011: 27), Inner Mongolia (Wu 2011: 27), Liaoning (Wang et al. 2012:16), Hebei (Shook and Wiesner 2006: 15, Wu 2011: 27), Shandong (Shook and Wiesner 2006: 15, Wu 2011: 27), Beijing (Shook and Wiesner 2006: 15, Wu 2011: 27), Shanxi (Shook and Wiesner 2006: 15, Wu 2011: 27), Gansu (Shook and Wiesner 2006: 15, Wu 2011: 27), Xinjiang (Wu 2011: 27), Anhui (Wu 2011: 27), Henan (Shook and Wiesner 2006: 15, Wu 2011: 27), Hubei (Shook and Wiesner 2006: 15, Wu 2011: 27), Hunan (Shook and Wiesner 2006: 15, Wu 2011: 27), Zhejiang (Shook and Wiesner 2006: 15, Wu 2011: 27), Guangdong (Shook and Wiesner 2006: 15, Wu 2011: 27), Hainan (Wu 2011: 27), Guangxi (Shook and Wiesner 2006: 15, Wu 2011: 27), Fujian (Shook and Wiesner 2006: 15), Shanghai (Shook and Wiesner 2006: 15, Wu 2011: 27), Jiangsu (Shook and Wiesner 2006: 15, Wu 2011: 27), Jiangxi (Shook and Wiesner 2006: 15, Wu 2011: 27), Qinghai (Wu 2011: 27, Bai 2016: 29), Sichuan (Shook and Wiesner 2006: 15, Wu 2011: 27), Yunnan (Shook and Wiesner 2006: 15, Shook and Wu 2006: 41, Wu 2011: 27), Xizang (Wu 2011: 27), Hong Kong (Shook and Wiesner 2006: 15), Taiwan (Shook and Wiesner 2006: 15, Wu 2011: 27).

New records. Heilongjiang, Harbin, Hadeng (哈灯, hand-written label), leg. unknown, 13.vii.1963, 2 males, 1 female (NEFU).

Distribution. China (Heilongjiang, Jilin, Inner Mongolia, Liaoning, Hebei, Shandong, Beijing, Shanxi, Gansu, Xinjiang, Anhui, Henan, Hubei, Hunan, Zhejiang, Guangdong, Hainan, Guangxi, Fujian, Shanghai, Jiangsu, Jiangxi, Qinghai, Sichuan, Yunnan, Xizang, Hong Kong, Taiwan), North Korea, South Korea, Vietnam, Russia, Mongolia.

Remarks. Wu (2011) and Wang et al. (2012) reported *C. (E.) elisae* from Heilongjiang without specimen record and detailed locality which makes it impossible to determine which subspecies was recorded. It is possible that *C. (E.) e. hulunbeierensis* is distributed in Heilongjiang as well. We hence provide the first record *C. (E.) elisae* for Heilongjiang.

***Cylindera (Eugrapha) sublacerata vicaria* (Semenov, 1895)**

Figs 6B, 7B

Cicindela sublacerata: Mandl 1955: 321.

Cicindela (Eugrapha) sublacerata: Acciavatti and Pearson 1989: 302.

Cylindera (Eugrapha) sublacerata vicaria: Wu 2011: 27.

Published data. Xinjiang (Acciavatti and Pearson 1989: 303; Li and Chen 1993: 107; Wu 2011: 27).

Records. Xinjiang, Changji, Fukang Desert Ecological System Observatory, 44°17'31"N, 87°56'3"E, 474 m, light trap, leg. Y. Liu, 11.vi.2007, 1 female (IZCAS).

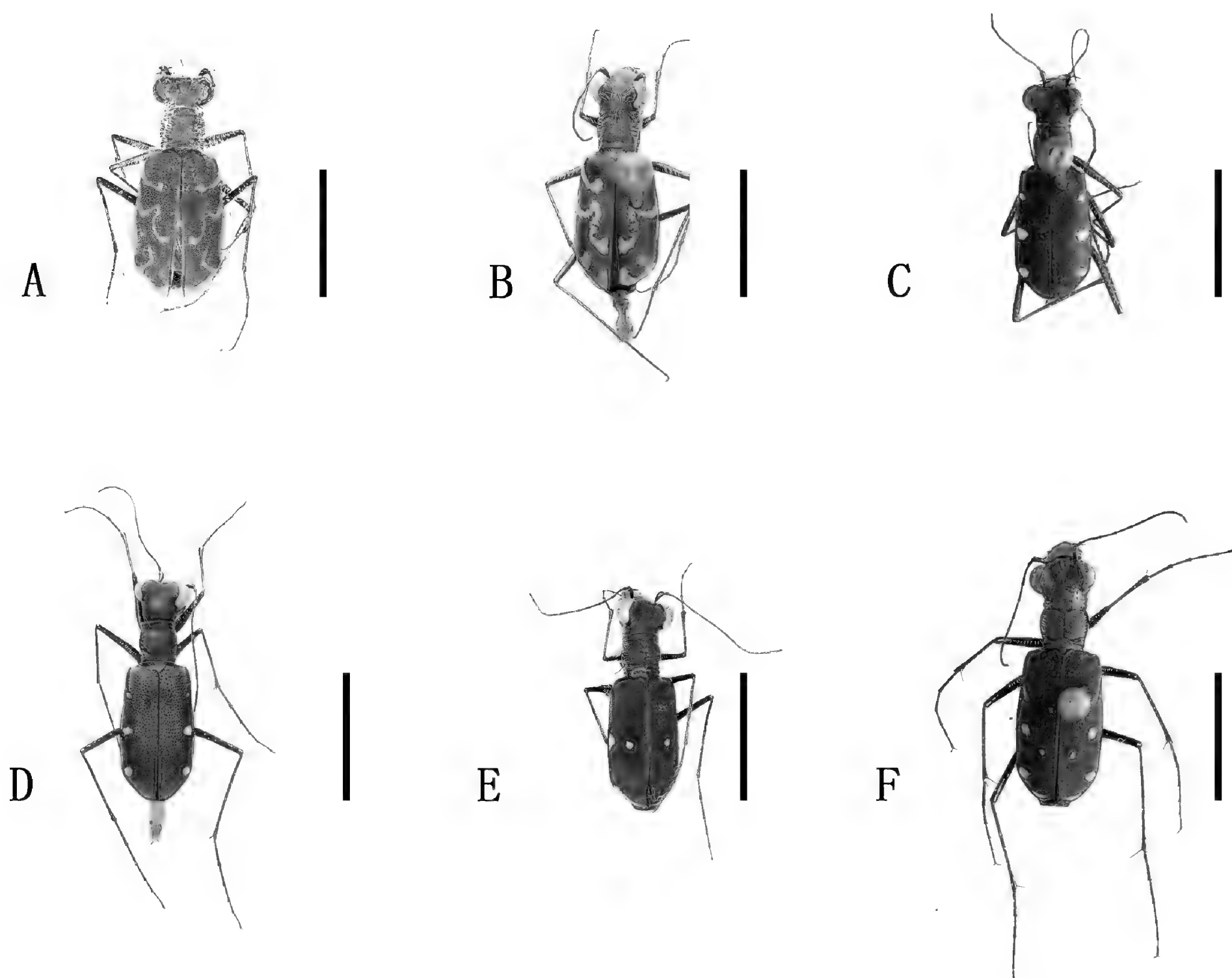


Figure 6. Habitus photographs **A** *Cylindera (Eugrapha) elisae elisae* (Motschulsky, 1859) **B** *Cylindera (Eugrapha) sublac-erata vicaria* (Semenov, 1895) **C** *Cylindera (Ifasina) decolorata* (Horn, 1907) **D** *Cylindera (Ifasina) lesnei* (Babault, 1923) **E** *Cylindera (Ifasina) sikhimensis* (Mandl, 1982) **F** *Lophyra (Spilodia) lineifrons* (Chaudoir, 1865). Scale bars: 5 mm.

Distribution. China (Xinjiang), Mongolia.

Remarks. We provide additional specimen data for this species from Xinjiang.

Subgenus *Ifasina* Jeannel, 1946

Cylindera (Ifasina) decolorata (Horn, 1907)

Figs 6C, 7C

Cicindela psilica decolorata: Horn 1907: 24.

Cylindera (Ifasina) decolorate: Shook and Wiesner 2006: 15; Wu 2011: 27.

Published data. Fujian (Shook and Wiesner 2006: 15; Wu 2011: 27), Guang-dong (Shook and Wiesner 2006: 15; Wu 2011: 27), Sichuan (Shook and Wiesner 2006: 15; Wu 2011: 27), Guizhou (Shook and Wiesner 2006: 15; Wu 2011: 27), Yunnan (Horn 1907: 24; Shook and Wiesner 2006: 15; Wu 2011: 27).

New records. Guangxi, Huaping Nature Reserve, Mount Tianping, leg. J.K. Yang, 5.vi.1963, 1 male, 1 female (EMCAU); Guangxi, Huaping Nature Reserve,

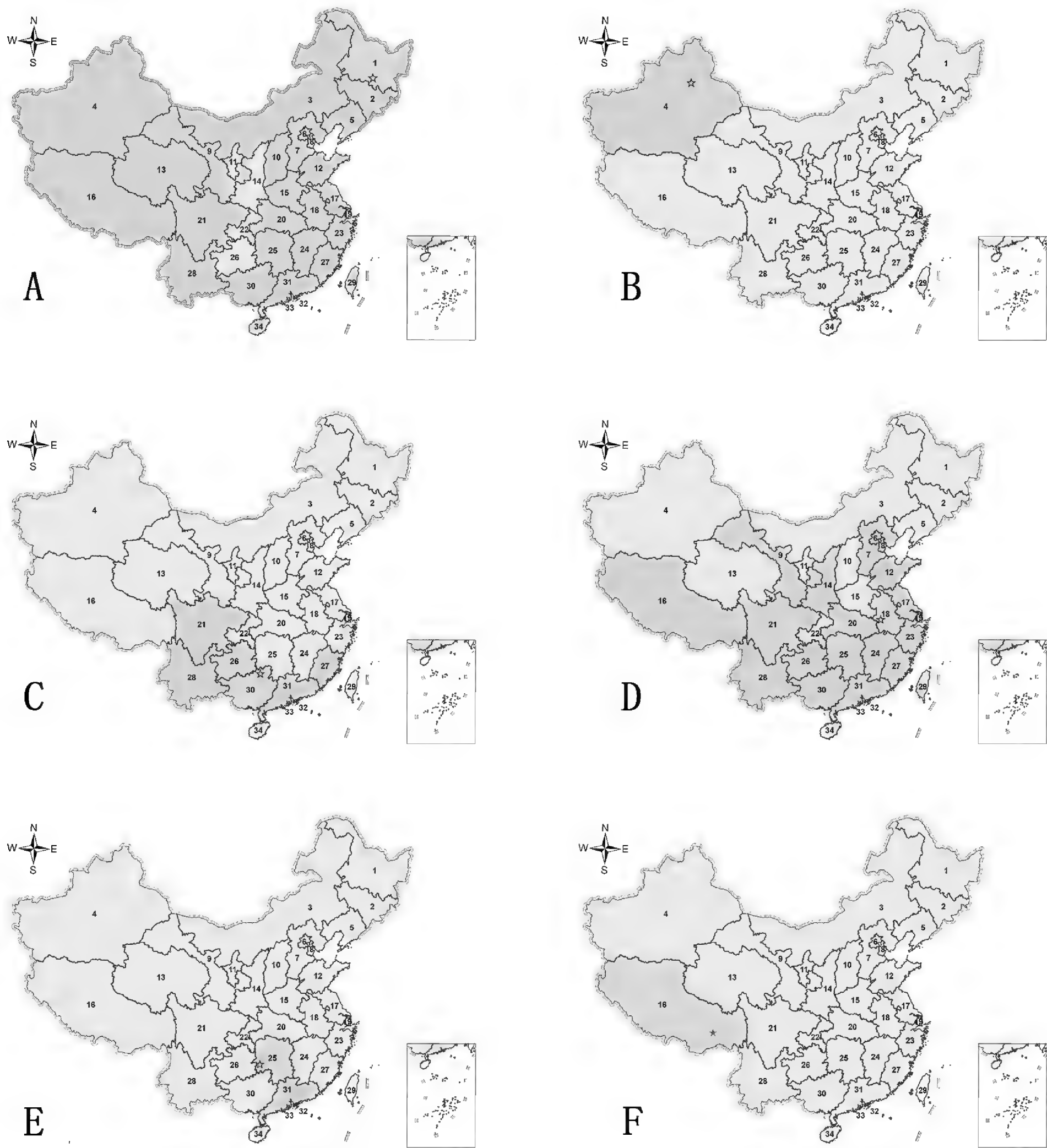


Figure 7. Distribution maps. Green indicates records with previously known distribution based on published data, blue indicates new records, red stars indicate the collection sites of the examined specimens **A** *Cylindera (Eugrapha) elisae elisae* (Motschulsky, 1859) **B** *Cylindera (Eugrapha) sublacerata vicaria* (Semenov, 1895) **C** *Cylindera (Ifasina) decolorata* (Horn, 1907) **D** *Cylindera (Ifasina) kaleea kaleea* (Bates, 1866) **E** *Cylindera (Ifasina) lesnei* (Babault, 1923) **F** *Cylindera (Ifasina) sikhimensis* (Mandl, 1982).

Dayan Station, 25°36'52"N, 109°52'33"E, 1061 m, leg. M.Y. Lin and Y.Y. Qin, 12.vii.2022, 5 males, 18 females (IZCAS).

Distribution. China (Guangxi, Fujian, Guangdong, Sichuan, Guizhou, Yunnan), Vietnam.

Remarks. New provincial record for Guangxi.

***Cylindera (Ifasina) kaleea kaleea* (Bates, 1866)**

Fig. 7D

Cicindela kaleea: Bates 1866: 340, 341.

Cylindera (Ifasina) kaleea kaleea: Shook and Wiesner 2006: 15, 16; Wu 2011: 28.

Published data. Beijing (Shook and Wiesner 2006: 15, 16; Wu 2011: 28), Hebei (Shook and Wiesner 2006: 15, 16; Wu 2011: 28), Shaanxi (Shook and Wiesner 2006: 15, 16; Wu 2011: 28), Gansu (Shook and Wiesner 2006: 15, 16; Wu 2011: 28), Shandong (Shook and Wiesner 2006: 15, 16; Wu 2011: 28), Jiangsu (Shook and Wiesner 2006: 15, 16; Wu 2011: 28), Shanghai (Shook and Wiesner 2006: 15, 16; Wu 2011: 28), Zhejiang (Shook and Wiesner 2006: 15, 16; Wu 2011: 28), Jiangxi (Shook and Wiesner 2006: 15, 16; Wu 2011: 28), Fujian (Shook and Wiesner 2006: 15, 16; Wu 2011: 28), Henan (Shook and Wiesner 2006: 15, 16; Wu 2011: 28), Hubei (Shook and Wiesner 2006: 15, 16; Wu 2011: 28), Hunan (Shook and Wiesner 2006: 15, 16; Wu 2011: 28), Guangdong (Shook and Wiesner 2006: 15, 16; Wu 2011: 28), Guangxi (Shook and Wiesner 2006: 15, 16; Wu 2011: 28), Sichuan (Shook and Wiesner 2006: 15, 16; Wu 2011: 28), Guizhou (Shook and Wiesner 2006: 15, 16; Wu 2011: 28), Yunnan (Shook and Wiesner 2006: 15, 16; Wu 2011: 28), Xizang (Shook and Wiesner 2006: 15, 16; Wu 2011: 28), Hong Kong (Shook and Wiesner 2006: 15, 16; Wu 2011: 28), Taiwan (Bates 1866: 340, 341; Shook and Wiesner 2006: 15, 16; Wu 2011: 28).

New records. Anhui, Tiantangzhai, Tudiling Bridge, 31°30'23"N, 116°09'07"E, 635 m, leg. unknown, 24.ix.2021, 1 male (IZCAS).

Distribution. China (Anhui, Beijing, Hebei, Shaanxi, Gansu, Shandong, Jiangsu, Shanghai, Zhejiang, Jiangxi, Fujian, Henan, Hubei, Hunan, Guangdong, Guangxi, Sichuan, Guizhou, Yunnan, Xizang, Hong Kong, Taiwan), India, Myanmar, Thailand, Laos, Vietnam.

Remarks. New provincial record for Anhui.

***Cylindera (Ifasina) lesnei* (Babault, 1923)**

Figs 6D, 7E

Cicindela lesnei: Babaule 1923: 7.

Cylindera (Ifasina) lesnei: Shook and Wiesner 2006: 16; Wu 2011: 28.

Published data. Guangdong (Shook and Wiesner 2006: 16; Wu 2011: 28).

New records. Hunan, Huitong, Raochong Village, 26°51'23"N, 109°50'43"E, 650 m, leg. H.B. Liang, 21.vi.2015, 1 female (IZCAS).

Distribution. China (Hunan, Guangdong), Vietnam.

Remarks. New provincial record for Hunan.

***Cylindera (Ifasina) sikhimensis* (Mandl, 1982)**

Figs 6E, 7F

Cicindela (Ifasina) discrete sikhimensis: Mandl 1982: 64, 65.

Cylindera (Ifasina) sikhimensis: Jaskula 2008: 33.

New records. Xizang, Motuo, 2 km SE of Beibeng, 29°14'8"N, 95°9'31"E, 843 m, light trap, leg. H.B. Liang, 29.vii.2012, 4 males, 9 females (IZCAS).

Distribution. China (Xizang), India, Myanmar.

Remarks. New state record for China and new provincial record for Xizang.

Genus *Lophyra* Motschulsky, 1859

Subgenus *Spilodia* Rivalier, 1961

***Lophyra (Spilodia) lineifrons* (Chaudoir, 1865)**

Figs 6F, 8A

Cicindela lineifrons: Chaudoir 1865: 39, 62.

Lophyra (Spilodia) lineifrons: Shook and Wiesner 2006: 17; Wu 2011: 28.

Published data. Yunnan (Shook and Wiesner 2006: 17; Wu 2011: 28).

New records. Guangxi, Ningming, Longrui, 180 m, leg. F.S. Li, 18.v.1984, 1 female (EMCAU).

Distribution. China (Guangxi, Yunnan), Nepal, Bangladesh, India, Myanmar, Thailand, Cambodia, Laos, Vietnam, Malaysia.

Remarks. New provincial record for Guangxi.

***Lophyra (Spilodia) striolata dorsolineolata* (Chevrolat, 1845)**

Figs 8A, 9B

Cicindela dorsolineolata: Chevrolat 1845: 95, 96.

Lophyra (Spilodia) striolata dorsolineolata: Shook and Wiesner 2006: 17; Wu 2011: 28; Wiesner et al. 2017: 56.

Published data. Beijing (Shook and Wiesner 2006: 17; Wu 2011: 28; Wiesner et al. 2017: 56), Hebei (Wu 2011: 28; Wiesner et al. 2017: 56), Shandong (Shook and Wiesner 2006: 17; Wu 2011: 28; Wiesner et al. 2017: 56), Jiangsu (Shook and Wiesner 2006: 17; Wu 2011: 28; Wiesner et al. 2017: 56), Zhejiang (Shook and Wiesner 2006: 17; Wu 2011: 28; Wiesner et al. 2017: 56), Anhui (Wu 2011: 28; Wiesner et al. 2017: 56), Jiangxi (Shook and Wiesner 2006: 17; Wu 2011: 28; Wiesner et al. 2017: 56), Fujian (Shook and Wiesner 2006: 17; Wu 2011: 28; Wiesner et al. 2017: 56), Henan (Shook and Wiesner 2006: 17; Wu 2011: 28; Wiesner et al. 2017: 56), Hubei (Shook and Wiesner 2006: 17; Wu 2011: 28; Wiesner et al. 2017: 56), Hunan (Shook and Wiesner 2006: 17; Wu 2011: 28; Wiesner et al. 2017: 56), Guangdong (Shook and Wiesner 2006: 17; Wu 2011: 28; Wiesner et al. 2017: 56), Guangxi (Wu 2011: 28; Wiesner et al. 2017: 56), Hainan (Shook and Wiesner 2006: 17; Wu 2011: 28; Wiesner et al. 2017: 56), Yunnan (Shook and Wiesner 2006: 17; Wu 2011: 28; Wiesner et al. 2017: 56), Guizhou (Wu 2011: 28; Wiesner et al. 2017: 56), Sichuan (Wu 2011: 28; Wiesner et al. 2017: 56), Taiwan (Shook and Wiesner 2006: 17; Wu 2011: 28; Wiesner et al. 2017: 56).

New records. Xizang, Beibeng, 2 km from Highway Gelin, 29°14'56"N, 95°11'20"E, 1013 m, leg. J.W. Jiang, 29.vii.2019, 3 males, 5 females (IZCAS).

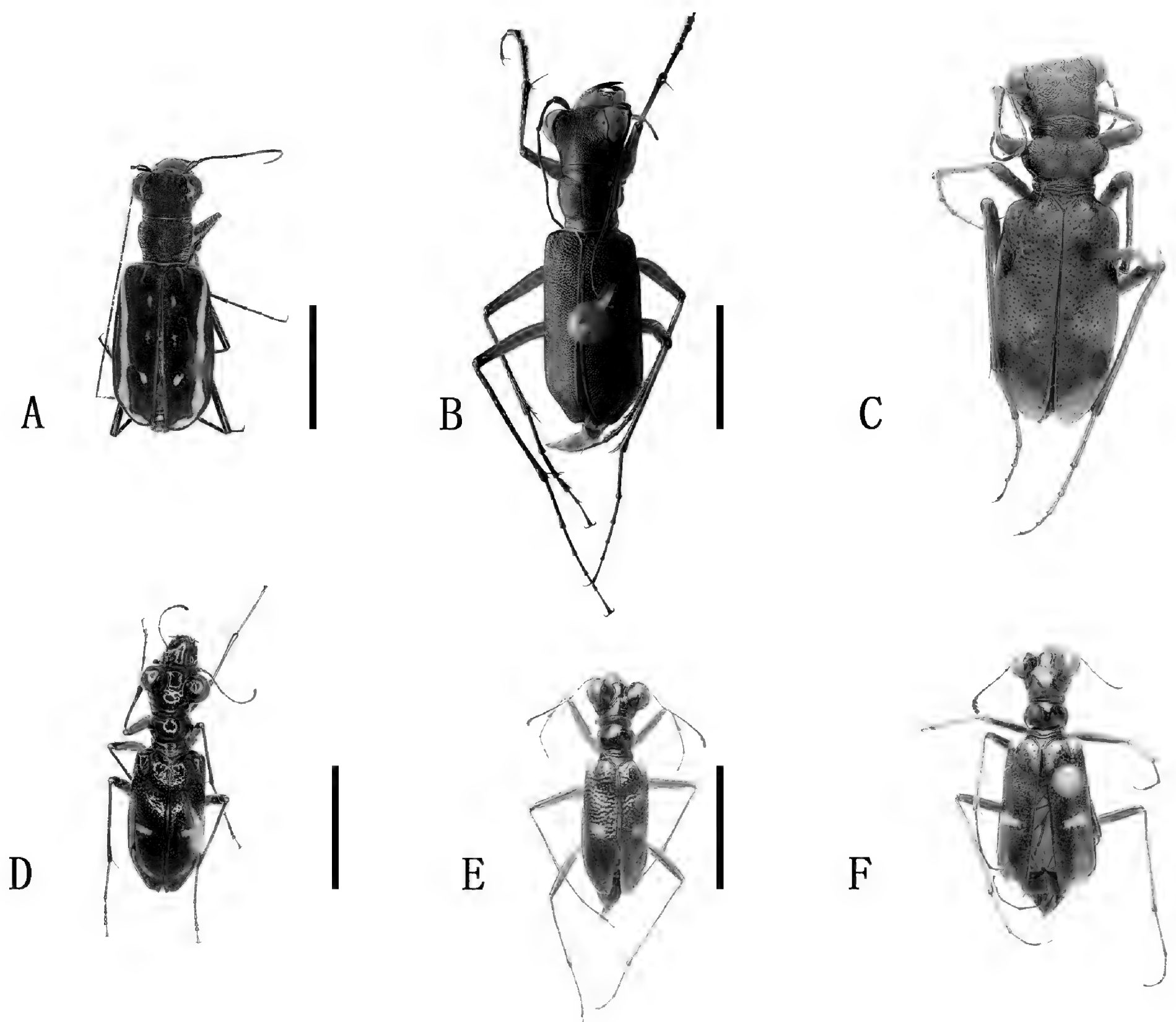


Figure 8. Habitus photographs **A** *Lophyra (Spilodia) striolata dorsolineolata* (Chevrolat, 1845) **B** *Heptodonta pulchella* (Hope, 1831) **C** *Pronyssiformia excoffieri* (Fairmaire, 1897) **D** *Therates biserratus* Tan, Mo & Liang, 1991 **E** *Therates guangdongensis* Wiesner, 2016 **F** *Therates hunanensis* Matalin & Wiesner, 2023. Scale bars: 5 mm.

Distribution. China (Xizang, Beijing, Hebei, Shandong, Zhejiang, Jiangsu, Anhui, Jiangxi, Fujian, Henan, Hubei, Hunan, Guangdong, Guangxi, Hainan, Yunnan, Guizhou, Sichuan, Taiwan), Japan, Vietnam, Indonesia, Philippines.

Remarks. New provincial record for Xizang.

Subtribe Dromicina Thomson, 1859

Genus *Heptodonta* Hope, 1838

***Heptodonta pulchella* (Hope, 1831)**

Figs 8B, 9C

Cicindela pulchella: Hope 1831: 21.

Heptodonta pulchella: Wu 2011: 28; Wiesner and Geiser 2016: 82; Görn 2020: 48.

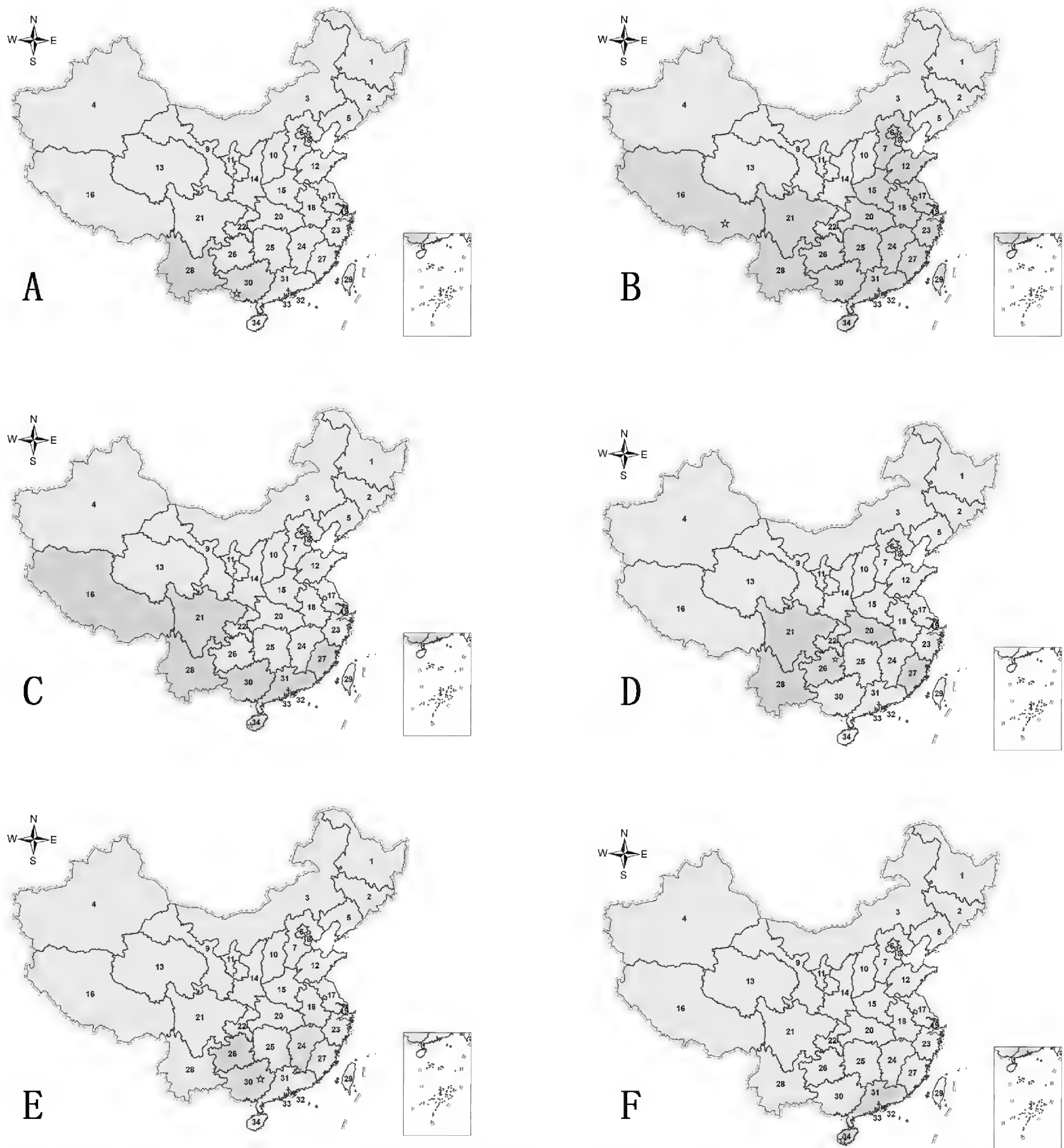


Figure 9. Distribution maps. Green indicates records with previously known distribution based on published data, blue indicates new records, red stars indicate the collection sites of the examined specimens **A** *Lophyra (Spilodia) lineifrons* (Chaudoir, 1865) **B** *Lophyra (Spilodia) striolata dorsolineolata* (Chevrolat, 1845) **C** *Heptodonta pulchella* (Hope, 1831) **D** *Pronyssiformia excoffieri* (Fairmaire, 1897) **E** *Therates biserratus* Tan, Mo & Liang, 1991 **F** *Therates guangdongensis* Wiesner, 2016.

Published data. Fujian (Wu 2011: 28; Wiesner and Geiser 2016: 82; Görn 2020:51), Guangdong (Görn 2020:51), Guangxi (Görn 2020:51), Yunnan (Wu 2011: 28; Wiesner and Geiser 2016: 82; Görn 2020:51), Sichuan (Görn 2020:51), Xizang (Wu 2011: 28; Wiesner and Geiser 2016: 82; Görn 2020:51), Macao (Wu 2011: 28; Wiesner and Geiser 2016: 82).

New records. Hainan, Jianfengling, Roadside of Tianchi, 18°43'44"N, 108°53'9"E, 1000 m, leg. H.B. Liang, 4.v.2007, 1 male, 2 females (IZCAS).

Distribution. China (Hainan, Fujian, Guangdong, Guangxi, Yunnan, Sichuan, Xizang, Macao), Nepal, India, Myanmar, Thailand, Laos, Vietnam.

Remarks. New provincial record for Hainan.

Genus *Pronyssiformia* Horn, 1929

***Pronyssiformia excoffieri* (Fairmaire, 1897)**

Figs 8C, 9D

Cicindela excoffieri: Fairmaire 1897: 14.

Pronyssiformia excoffieri: Horn 1929: 5; Shook and Wiesner 2006: 20; Wu 2011: 31.

Published data. Fujian (Shook and Wiesner 2006: 20; Wu 2011: 31), Hubei (Shook and Wiesner 2006: 20; Wu 2011: 31), Sichuan (Horn 1929: 6; Shook and Wiesner 2006: 20; Wu 2011: 31), Yunnan (Fairmaire 1897:14; Shook and Wiesner 2006; Wu 2011: 31).

New records. Guizhou, Mount Fanjing, Huguosi, 27°54'44"N, 108°38'37"E, 1350 m, leg. Q.Z. Song, 3.viii.2001, 1 female (IZCAS).

Distribution. China (Guizhou, Fujian, Hubei, Sichuan, Yunnan).

Remarks. New provincial record for Guizhou.

Subtribe Theratina Horn, 1893

Genus *Therates* Latreille, 1816

***Therates biserratus* Tan, Mo & Liang, 1991**

Figs 8D, 9E

Therates biserratus: Tan et al. 1991: 243; Matalin and Wiesner 2023: 414, 415.

Published data. Guizhou (Jiangkou; Yinjiang) (Tan et al. 1991: 243; Matalin and Wiesner 2023: 414, 415).

New records. Guangxi, Jinxiu, Luoxiang, 400 m, leg. D.C. Yuan, 14.v.1999, 1 male (IZCAS); Jiangxi, Longnan, Mount Jiulian, leg. Y.W. Zhang, 14.vi.1975, 1 female (IZCAS).

Distribution. China (Guangxi, Jiangxi, Guizhou).

Remarks. New provincial record for Guangxi and Jiangxi.

***Therates guangdongensis* Wiesner, 2016**

Figs 8E, 9F

Therates guangdongensis: Wiesner 2016: 131, 132.

Published data. Guangdong (Yinnah Shan) (Wiesner 2016: 131,132).

New records. Hainan, Baisha County, Nanmaola, leg. X.L. Huang, 13.v.2009, 1 male (IZCAS).

Distribution. China (Guangdong, Hainan).

Remarks. New provincial record for Hainan.

***Therates hunanensis* Matalin & Wiesner, 2023**

Figs 8F, 11A

Therates hunanensis: Matalin and Wiesner 2023: 415.

Published data. Hunan (Dong'an; Chengbu) (Matalin and Wiesner 2023: 415).

New records. Chongqing, Mount Simian, 28°35–37'N, 106°23–24'E, 1190 m, leg. Z.H. Yang, 5.vii.2008, 1 male (IZCAS).

Distribution. China (Chongqing, Hunan).

Remarks. New provincial record for Chongqing.

***Therates probsti* Wiesner, 1988**

Figs 10A, 11B

Therates probsti: Wiesner 1988:20.

New records. Xizang, Motuo, Yarang Hydropower Station, 29°15'54"N, 95°14'43"E, 850 m, leg. H.B. Liang, 1.viii.2019, 1 female (IZCAS).

Distribution. China (Xizang), Laos, Vietnam.

Remarks. New state record for China and new provincial record for Xizang.

***Therates turnai* Wiesner, 2015**

Figs 10B, 11C

Therates turnai: Wiesner 2015: 44–47.

Published data. Guizhou (Xianheping) (Wiesner 2016: 44–47).

New records. Sichuan, Mount Emei, Xixinsuo, 29°34'30"N, 103°22'26"E, 1300 m, day collecting, leg. H.B. Liang, 10–15.viii.2012, 1 male (IZCAS).

Distribution. China (Guizhou, Sichuan).

Remarks. New provincial record for Sichuan.

Tribe Collyridini Brullé, 1834

Subtribe Collyridini Brullé, 1834

Genus *Neocollyris* Horn, 1901

Subgenus *Isocollyris* Naviaux, 1994

***Neocollyris (Isocollyris) grandivadosa* (Horn, 1935)**

Figs 10C, 11D

Collyris aureofusca grandivadosa: Horn 1935: 50, 51.

Neocollyris (Isocollyris) grandivadosa: Naviaux 2004: 74, 75, 76.

New records. Guangxi, Napo County, 23°43'33"N, 106°49'30"E, 111 m, hand collected, leg. Y. Wang, 16.v.2021, 1 male, 1 female (IZCAS).

Distribution. China (Guangxi), Vietnam.

Remarks. New state record for China and new provincial record for Guangxi.

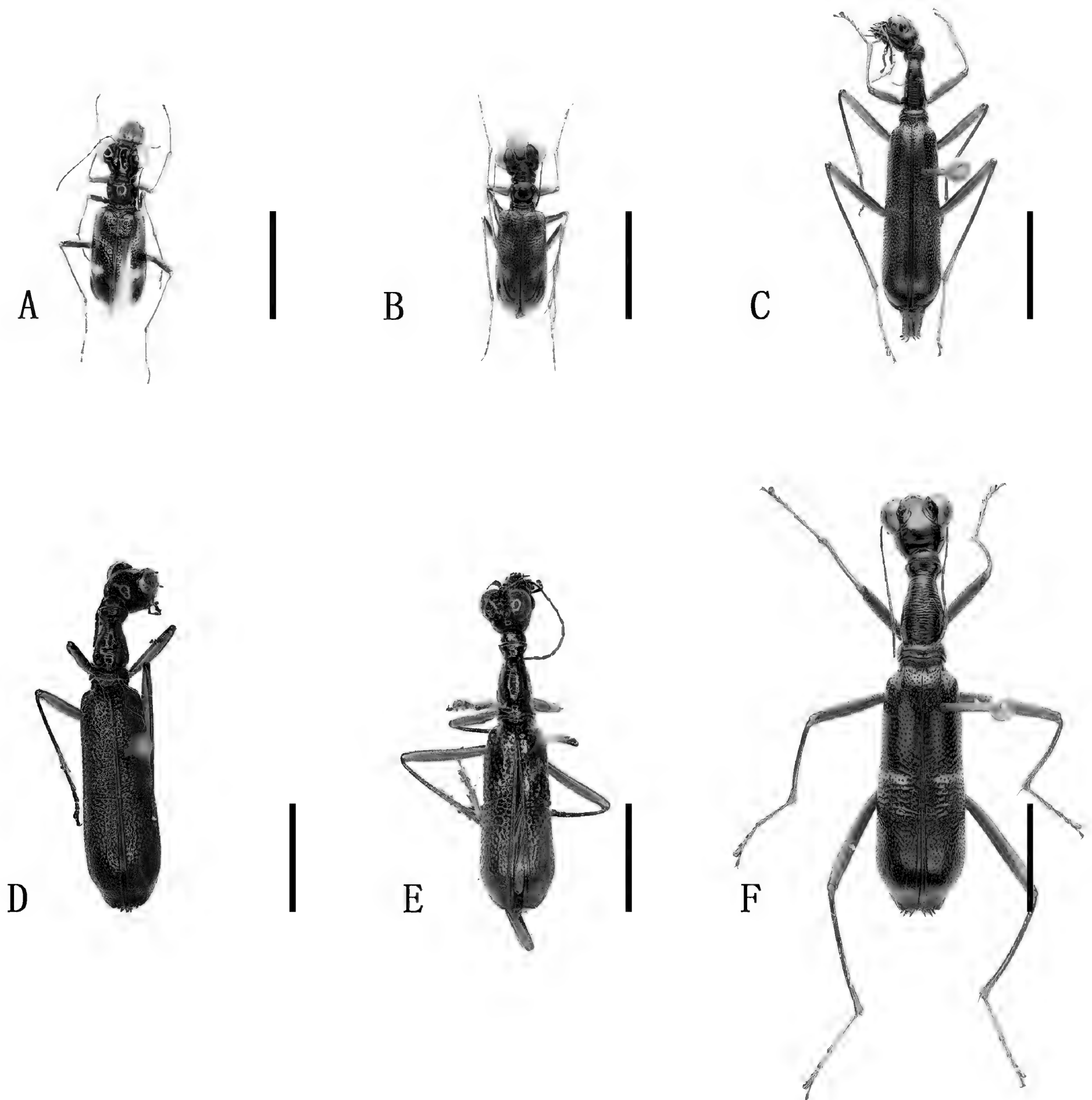


Figure 10. Habitus photographs **A** *Therates probsti* Wiesner, 1988 **B** *Therates turnai* Wiesner, 2015 **C** *Neocollyris* (*Isocollyris*) *grandivadosa* (Horn, 1935) **D** *Neocollyris* (*Neocollyris*) *saphyrina* (Chaudoir, 1850) **E** *Neocollyris* (*Pachycollyris*) *bicolor* (Horn, 1902) **F** *Neocollyris* (*Pachycollyris*) *mouhotii nagaii* Naviaux & Sawada, 1992. Scale bars: 5 mm.

Subgenus *Neocollyris* Horn, 1901

Neocollyris (*Neocollyris*) *saphyrina* (Chaudoir, 1850)

Figs 10D, 11E

Neocollyris (*Neocollyris*) *saphyrina*: Li and Chen 1993: 102.

Published data. ?Yunnan (Li and Chen 1993: 102), ?Sichuan (Xichang) (Li and Chen 1993: 102).

New records. Xizang, Shigatse, Gyirong, 2400 m, leg. F.S. Huang, 22.vii.1975, 1 female (IZCAS).

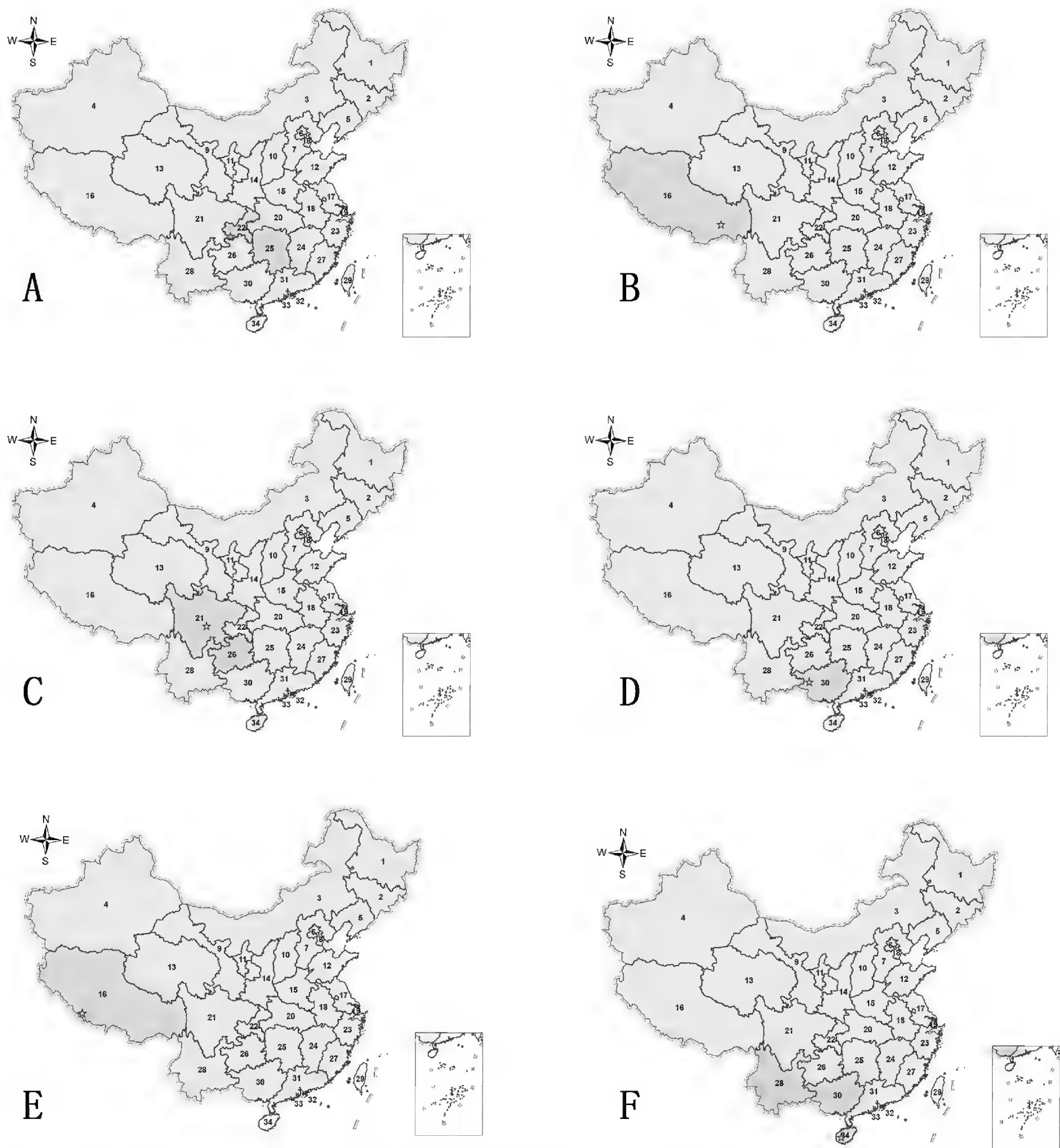


Figure 11. Distribution maps. Green indicates records with previously known distribution based on published data, blue indicates new records, red stars indicate the collection sites of the examined specimens **A** *Therates hunanensis* Matalin & Wiesner, 2023 **B** *Therates probsti* Wiesner, 1988 **C** *Therates turnai* Wiesner, 2015 **D** *Neocollyris (Isocollyris) grandivadosa* (Horn, 1935) **E** *Neocollyris (Neocollyris) saphyrina* (Chaudoir, 1850) **F** *Neocollyris (Pachycollyris) bicolor* (Horn, 1902).

Distribution. China (Xizang, ?Yunnan, ?Sichuan), India, Myanmar, Laos, Nepal, Bhutan, Bangladesh, Thailand, Indonesia.

Remarks. Gyirong borders Nepal, from where *N. saphyrina* was previously known. Shook and Wiesner (2006) indicated that records included by Li and Chen (1993) for *N. (N.) saphyrina* in Yunnan and Sichuan (Xichang) required confirmation. The location reported here, Gyirong, is far from Yunnan and Sichuan, and the closest confirmed distribution of *N. (N.) saphyrina* to Yunnan

and Sichuan is in Cambodia and Laos, but with some similar species present in this area, the records for Yunnan and Sichuan still need to be re-examined. We restore the record of *N. (N.) saphyrina* for China with a new provincial record for Xizang.

Subgenus *Pachycollyris* Naviaux, 1995

***Neocollyris (Pachycollyris) bicolor* (Horn, 1902)**

Figs 10E, 11F

Collyris bicolor: Horn 1902: 70.

Neocollyris (Pachycollyris) bicolor: Wu 2011: 30; Wiesner and Geiser 2016: 77.

Published data. Guangxi (Wu 2011: 30; Wiesner and Geiser 2016: 77), Yunnan (Wu 2011: 30; Wiesner and Geiser 2016: 77).

New records. Hainan, Wuzhishan, Fanyang Town, leg. G. Ros, 1.vii.1956, 1 female (IZCAS).

Distribution. China (Hainan, Guangxi, Yunnan), Laos, Vietnam.

Remarks. New provincial record for Hainan.

***Neocollyris (Pachycollyris) mouhotii nagaii* Naviaux & Sawada, 1992**

Figs 10F, 13A

Neocollyris mouhotii nagaii: Naviaux and Sawada 1992: 46, 47, 48.

Neocollyris (Pachycollyris) mouhotii nagaii: Naviaux 1995: 267.

New records. Hainan, Baisha County, Yinggeling, 18°59'28"N, 109°20'18"E, leg. M.Y. Lin, 14.vi.2010, 1 female (IZCAS).

Distribution. China (Hainan), Vietnam.

Remarks. New state record for China and new provincial record for Hainan.

***Neocollyris (Pachycollyris) sawadai* Naviaux, 1991**

Figs 12A, 13B

Neocollyris sawadai: Naviaux 1991a: 222.

New records. Yunnan, Pu'er, Simao, day collecting, leg. H.L. Han and M.J. Qi, 15–19.vii.2009, 1 female (NEFU).

Distribution. China (Yunnan), Vietnam.

Remarks. New state record for China and new provincial record for Yunnan.

***Neocollyris (Pachycollyris) strangulata* Naviaux, 1991**

Figs 12B, 13C

Neocollyris strangulata: Naviaux 1991b: 276, 277.

Neocollyris (Pachycollyris) strangulata: Naviaux 1995: 263, 264.

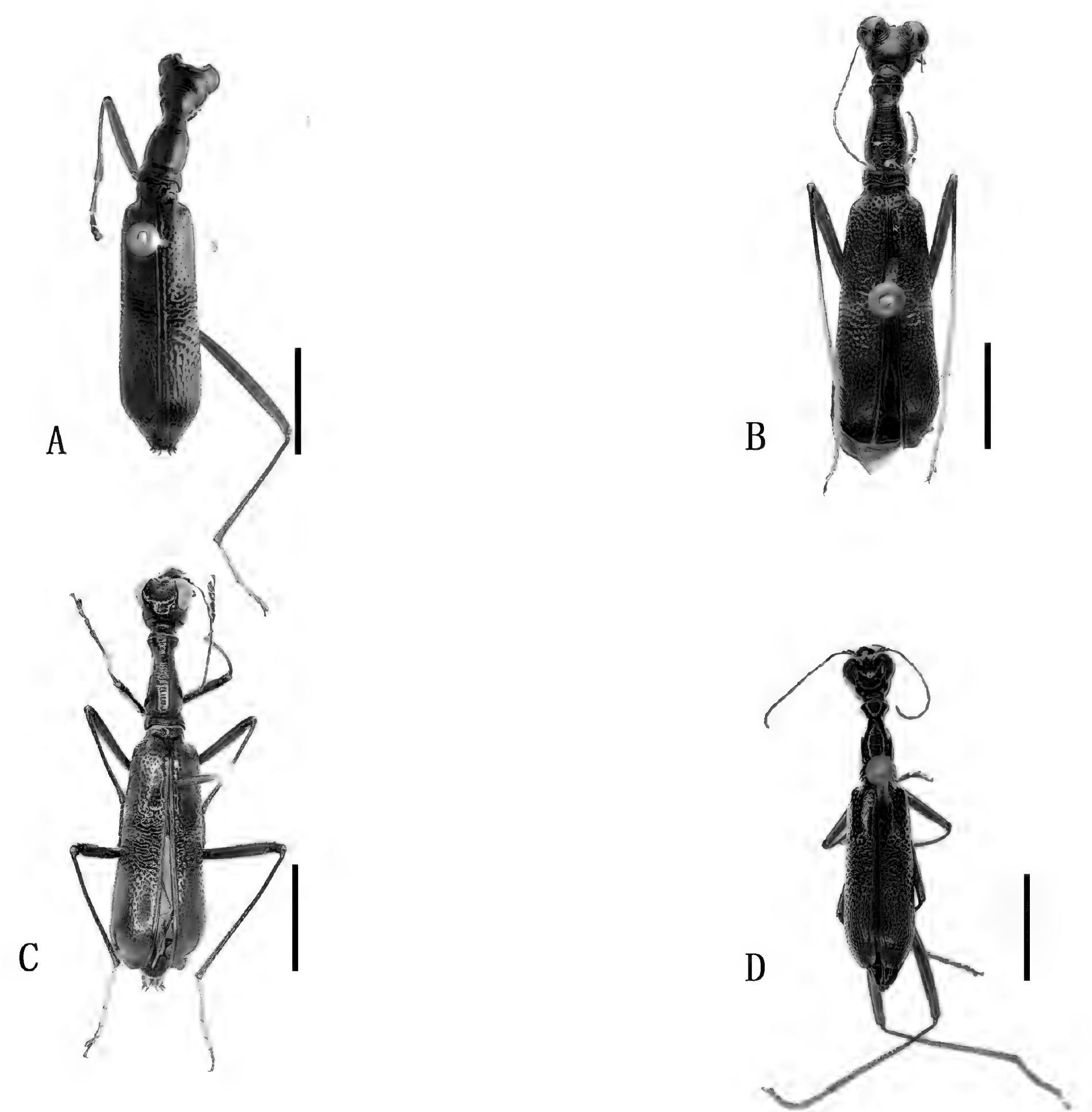


Figure 12. Habitus photographs **A** *Neocollyris (Pachycollyris) sawadai* Naviaux, 1991 **B** *Neocollyris (Pachycollyris) strangulata* Naviaux, 1991 **C** *Neocollyris (Pachycollyris) tricolor* Naviaux, 1991 **D** *Neocollyris (Pachycollyris) vitalisi* (Horn, 1924). Scale bars: 5 mm.

New records. Guangxi, Jingxi City, Diding Nature Reserve, 23°6'47"N, 105°58'40"E, leg. S.Y. Zhou and J.H. Huang, 9.viii.2010, 1 female (IZCAS).
Distribution. China (Guangxi), Laos, Vietnam.
Remarks. New state record for China and new provincial record for Guangxi.

***Neocollyris (Pachycollyris) tricolor* Naviaux, 1991**
Figs 12C, 13D

Neocollyris tricolor: Naviaux 1991c: 19, 20.

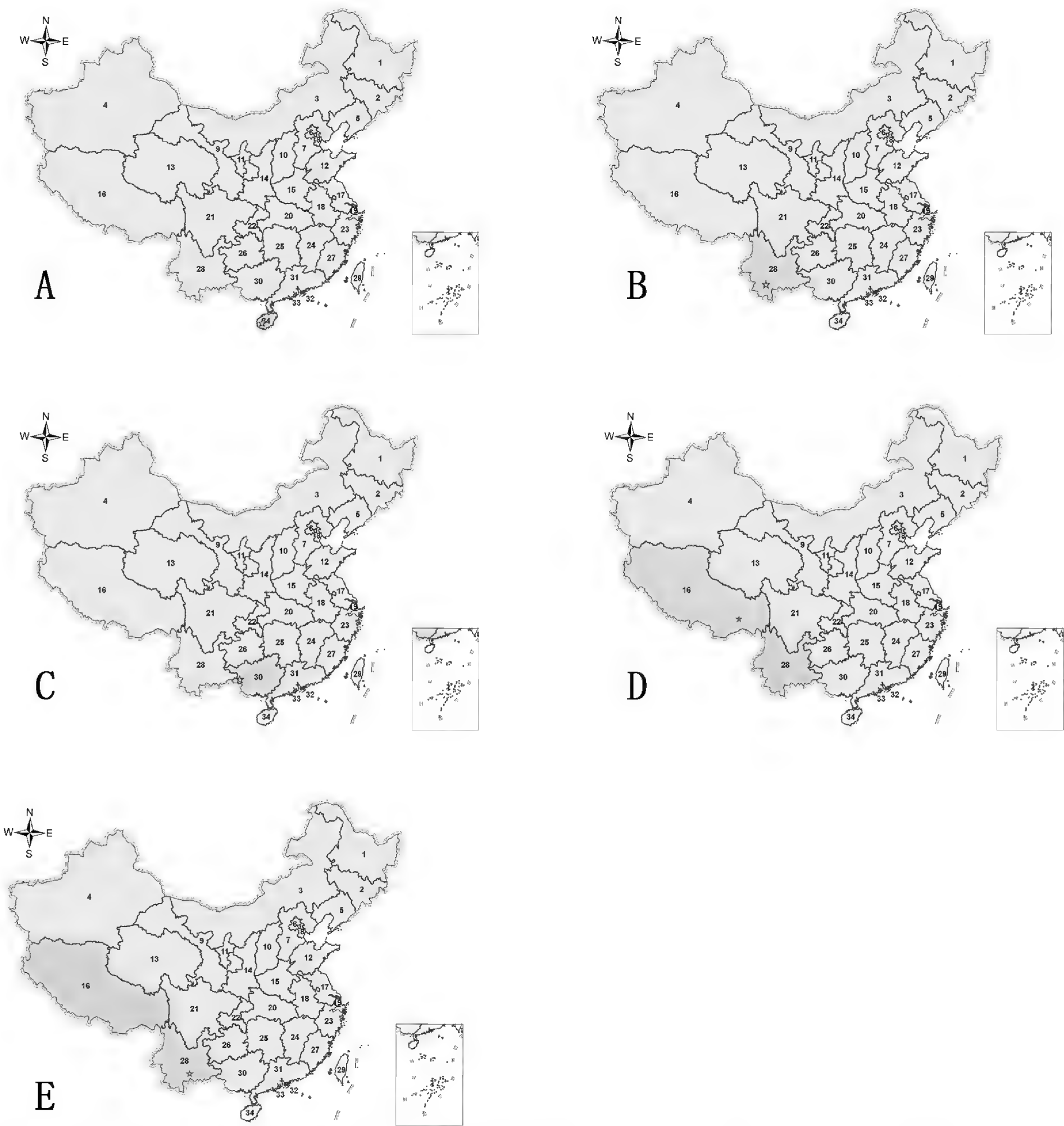


Figure 13. Distribution maps. Green indicates records with previously known distribution based on published data, blue indicates new records, red stars indicate the collection sites of the examined specimens **A** *Neocollyris (Pachycollyris) mouhotii nagaii* Naviaux & Sawada, 1992 **B** *Neocollyris (Pachycollyris) sawadai* Naviaux, 1991 **C** *Neocollyris (Pachycollyris) strangulata* Naviaux, 1991 **D** *Neocollyris (Pachycollyris) tricolor* Naviaux, 1991 **E** *Neocollyris (Pachycollyris) vitalisi* (Horn, 1924).

Neocollyris (Pachycollyris) tricolor: Wu and Shook 2007: 39; Wu 2011: 31.

Published data. Yunnan (Lincang) (Wu and Shook 2007:39; Wu 2011: 31).

New records. Xizang, Beibeng, 2 km from Highway Gelin, 29°14'56"N, 95°11'20"E, 1013 m, leg. J.W. Jiang, 29.vii.2019, 1 female (IZCAS).

Distribution. China (Xizang, Yunnan), Myanmar, Thailand, Laos, Vietnam.

Remarks. New provincial record for Xizang.

***Neocollyris (Pachycollyris) vitalisi* (Horn, 1924)**

Figs 12D, 13E

Neocollyris (Pachycollyris) feai vitalisi: Naviaux 1995: 256, 257.

Neocollyris (Pachycollyris) vitalisi: Cassola 2005: 15; Wiesner and Geiser 2016: 78.

Published data. Xizang (Wiesner and Geiser 2016: 78).

New records. Yunnan, Mount Huanglian, Beiluo, 22°44'8"N, 102°18'27"E, 1277 m, day collecting, leg. G.Z. Zhong and L.K. Zhang, 09–15.IX.2016, 1 female (KIZCAS).

Distribution. China (Yunnan, Xizang), Myanmar, Thailand, Laos, Vietnam.

Remarks. New provincial record for Yunnan.

Discussion

During our investigation of Chinese collections, we encountered a single specimen of *Cicindela (Cicindela) japana* Motschulsky, 1858 [Anhui, China = CHINE, Prov. ANHWEI-printed label] (Fig. 14). *Cicindela (C.) japana* is only known from Japan, where it occurs on the four main islands and several smaller adjacent islands. One specimen deposited in a museum collection in Vladivostok was collected on Kunashir Island and supposedly blown there from Hokkaido by strong winds (A.V. Matalin pers. comm.). Previous records of *C. (C.) japana* from China and South Korea that could be examined by us all referred to misidentified specimens of *C. (C.) sachalinensis raddei*. Thus, it seems unlikely that *C. (C.) japana* occurs in China, especially in an inland province far from Japan. Given the age of this specimen, and the absence of labels indicating the collector and date, we suspect it may have been mislabeled.

With the new records presented here, the tiger beetle fauna of China now includes 208 species, 71 (34%) of which are endemic. Five of the new records reported here are from the Chayu and Motuo, regions in the southeast of Xizang. This area is located at the junction of the Hengduan Mountains and the Himalayas and is surrounded by many biogeographical barriers. These five species were previously known from adjacent regions and countries, including Yunan Province, Sichuan Province, Myanmar, and India, from which they may have dispersed. More research on the tiger beetle diversity in this region, the southeast of Xizang, is needed and has great potential to broaden our understanding of the biogeography of tiger beetles within China.

Recently, Matalin et al. (2024) restored *Apterodela (Apterodela) bivirgulata* (Fairmaire, 1889) as a separate species. Before the reclassification, *Apterodela (Apterodela) lobipennis* (Bates, 1888) was regarded as one of the common tiger beetles in China, with many specimens preserved in collections. All these specimens need to be re-examined to determine their exact classification. Therefore, additional specimens and photographic records will facilitate the progress of identification.

Furthermore, we report new provincial records of *Therates biserratus* Tan, Mo & Liang, 1991 and *Therates hunanensis* Matalin & Wiesner, 2023 in China. *Therates biserratus* has been included in the List of Key Protected Wild Animals

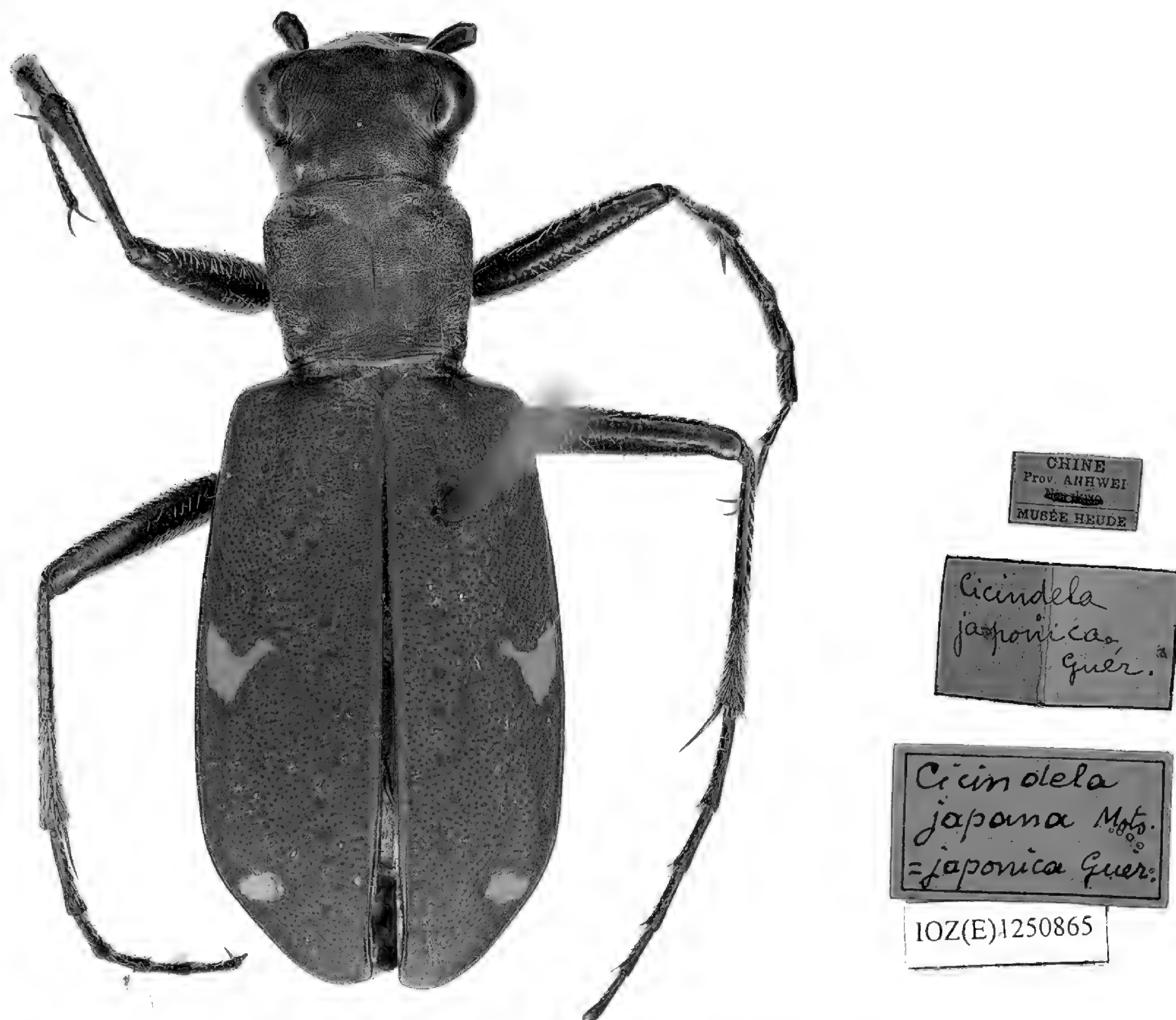


Figure 14. *Cicindela (Cicindela) japana* Motschulsky, 1858. Habitus and specimen labels.

in China since 2003, although it has not been considered as a separate species for a long time. According to the known distribution, *T. biserratus* may indeed be widely distributed in Nan Ling Area (24°00'–26°30'N, 110°–116°E). This may ultimately lead to reconsideration of the taxonomic status between these two species. Due to the limited number of specimens included in this and other studies (Matalin and Wiesner 2023), more specimens are needed to adequately determine their status.

To date, taxonomic studies on tiger beetles from Guangxi and Hainan are relatively scarce (Naviaux 2010; Xiong and Wiesner 2022). Here, we report nine new records from Guangxi and four new records from Hainan. We believe that the diversity of tiger beetles in these two provinces far exceeds the currently known records and deserves more attention from taxonomists.

Many of the specimens reported here are old specimens that have not been previously identified. There are likely numerous unidentified tiger beetle specimens in other institutions and museums in China, which hold considerable yet untapped data. We encourage others to recognize and utilize this potential and are willing to help in identification.

Acknowledgements

We are grateful to Huilin Han (NEFU), Hongbin Liang (IZCAS), Ming Bai (IZCAS), Hongzhang Zhou (IZCAS), Xingyue Liu (EMCAU), and Kaiqin Li (KIZCAS) for providing us with the opportunity to examine specimens housed in the collections under their supervision. We thank Kuiyan Zhang (IZCAS) and Zhehao Tian (IZCAS) for providing some specimens and photographs. Furthermore, we extend our gratitude to Andrey V. Matalin (Moscow, Russia), Charles Dheurle (Langres, France), Il-Kwon Kim (KNA, South Korea), and Sebastian Görn (Stuttgart, Germany) for providing information. And we thank Jiayu Liu (NEFU) and Zongkun Tu (NEFU) for processing certain images. Lastly, we would like to thank David L. Pearson (Arizona State University, USA) for kindly revising the English text.

Additional information

Conflict of interest

The authors have declared that no competing interests exist.

Ethical statement

No ethical statement was reported.

Funding


No funding was reported.

Author contributions

Conceptualization: KYW. Formal analysis: JW, FAB. Funding acquisition: CDL. Investigation: KYW. Resources: CDL. Supervision: CDL. Visualization: KYW. Writing - original draft: KYW. Writing - review and editing: FAB, JW.

Author ORCIDs

Ke-Yi Wang  <https://orcid.org/0009-0009-8915-9563>

Fabian A. Boetzi  <https://orcid.org/0000-0001-5121-3370>

Jürgen Wiesner  <https://orcid.org/0000-0002-7824-166X>

Data availability

All of the data that support the findings of this study are available in the main text.

References

- Acciavatti RE, Pearson DL (1989) The tiger beetle genus *Cicindela* (Coleoptera, Insecta) from the Indian Subcontinent. *Annals of the Carnegie Museum* 58(4): 77–349. <https://doi.org/10.5962/p.215810>
- Adams MF (1817) Descriptio insectorum novorum Imperii Rossici, imprimis Caucasi et Siberiae. *Mémoires de la Société Impériale des Naturalistes de Moscou* 5: 278–314.
- Aston P (2016) Catalogue and bibliography of the Hong Kong Carabidae Latreille, 1802 (Coleoptera: Adephaga), with notes on the historic boundaries of Hong Kong as related to zoological collections. *Zootaxa* 4121(3): 201–257. <https://doi.org/10.11646/zootaxa.4121.3.1>

- Aston P (2018) Three species of Tiger Beetles (Carabidae, Cicindelinae) new to the Hong Kong Fauna. *Hong Kong Entomological Bulletin* 10(2): 3–6.
- Babault G (1923) Description d'une nouvelle espèce de *Cicindela* du Tonkin (Col.). *Bulletin de la Société Entomologique de France* 28(1): 7–9. <https://doi.org/10.3406/bsef.1923.27091>
- Bai L (2016) Species diversity and Biogeography of Beetles from Ningxia of China. Hebei University, China, 245 pp.
- Bates HW (1866) On a collection of Coleoptera from Formosa, sent home by R. SWINHOE, Esq., H.B.M. Consul, Formosa. *Proceeding of the Scientific Meeting of the Zoological Society of London* 34: 339–355.
- Cassola F (2005) Studies of tiger beetles. 155. New data from Thailand and Cambodia (Coleoptera: Cicindelidae). *Bulletin de l'Institut Royal des Sciences Naturelles de Belgique. Entomologie, Bruxelles* 75: 13–21.
- Cassola F, Pearson D (2000) Global patterns of tiger beetle species richness (Coleoptera: Cicindelidae): Their use in conservation planning. *Biological Conservation* 95(2): 197–208. [https://doi.org/10.1016/S0006-3207\(00\)00034-3](https://doi.org/10.1016/S0006-3207(00)00034-3)
- Chaudoir M (1852) Mémoire sur la famille des carabiques. 3e partie. *Bulletin de la Société Impériale des Naturalistes de Moscou* 25(1): 3–104.
- Chaudoir M (1865) Catalogue de la collection de cicindèles de M. le Baron de Chaudoir. J.NYS, Bruxelles, 64 pp. <https://doi.org/10.5962/bhl.title.134840>
- Chevrolat LAA (1845) Description de dix coléoptères de Chine, des environs de Macao, et provenant d'une acquisition faite chez M. Parsudaki, marchand naturaliste à Paris. *Revue Zoologique par la Société Cuvierienne* 8: 95–99.
- Di JM, Ren GD (2021) The Illustrated Handbook of Insects in Hebei, China (Volume I). Science Press, Beijing, 487 pp.
- Fairmaire L (1889) Coléoptères de l'intérieur de la Chine. *Annales de la Société Entomologique de France* 9(6): 5–84.
- Fairmaire L (1897) Note XXV. Description de coléoptères nouveaux de la Malaisie, de l'Inde et de la Chine. *Notes from the Leyden Museum* 19: 209–233.
- Fleutiaux EJB (1893) Remarques sur quelques Cicindelidae et descriptions d'espèces nouvelles. *Annales de la Société Entomologique de France* 62: 483–502.
- Gebert J, Matalin AV, Boetzi FA (2021) Revision of the Palearctic *Cicindela campestris* species complex – Part 1: On the taxonomy, identification and ecology of *Cicindela herbacea* Klug, 1832 and *Cicindela javetii* Chaudoir, 1861 (Coleoptera, Cicindelidae). *Zootaxa* 4990(3): 469–510. <https://doi.org/10.11646/zootaxa.4990.3.3>
- Görn S (2020) Revision of the Oriental tiger beetle genus *Heptodonta* Hope, 1838 (Coleoptera: Cicindelidae). *Zootaxa* 4875(1): 1–62. <https://doi.org/10.11646/zootaxa.4875.1.1>
- Hope FW (1831) Synopsis of the new species of Nepaul insects in the collection of Major General Hardwicke. *The Zoological Miscellany* 1: 21–32.
- Horn W (1902) Neue Cicindeliden gesammelt von Fruhstorfer in Tonkin 1900. *Deutsche Entomologische Zeitschrift* 1: 65–75.
- Horn W (1907) Zur Kenntnis der Gattung *Cicindela*. (Col.). *Deutsche Entomologische Zeitschrift* 1907(1): 20–25. <https://doi.org/10.1002/mmnd.48019070109>
- Horn W (1929) Über einige orientalische und aethiopische Cicindelinae-Genera. *Entomologisches Nachrichtenblatt* 3(1): 3–9.
- Horn W (1935) Neues über *Collyris*-Formen (Cicind.). *Koleopterologische Rundschau* 21(1–2): 49–54.

- Jaskula R (2008) Notes on tiger beetle fauna (Coleoptera: Cicindelidae) of Myanmar with the first country record of *Calochroa interruptofasciata flavolineata* (Chaudoir). *Cicindela* 40(1–2): 25–31.
- Kolbe HJ (1886) Beiträge zur Kenntnis der Coleopteren-Fauna Koreas, bearbeitet auf Grund der von Herrn Dr. C.Gottsche während der Jahre 1883–1884 in Korea veranstalteten Sammlung. *Archiv für Naturgeschichte* 52(1): 139–157, 163–240. <https://doi.org/10.5962/bhl.part.28437>
- Li J, Chen P (1993) Studies on Fauna and Ecogeography of Soil Animal. Northwest Normal University Press, Gansu, 265 pp.
- Li GF, Lin P, Qing SY (2012) The research on tiger beetle fauna in China. *Journal of China West Normal University* 33(2): 125–130.
- Lin TJ, Ho JZ (2007) A new record of tiger beetle *Abroscelis anchoralis anchoralis* (Coleoptera: Cicindelidae) in Taiwan. *Formosan Entomologist* 27: 179–182.
- Lorenz W (2021) Carabcat database. Catalogue of Life Checklist [version 03 (08/2021)]. <https://doi.org/https://doi.org/10.48580/dfrdl-3dk>
- Mandl KF (1955) Die Cicindelen, Caraben und Calosomen (Col.) der Afghanistan-Expedition 1951 und 1952 J.Klapperichs (17. Beitrag zur Kenntnis paläarktischer Cicindelen). *Entomologische Arbeiten aus dem Museum G. Frey Tutzing bei München* 6(1): 317–333.
- Mandl KF (1981) Neun neue Formen aus der Familie Cicindelidae aus fünf Kontinenten (Col.). *Koleopterologische Rundschau* 55: 3–18.
- Mandl KF (1982) Neue Cicindelidenformen aus der Sammlung des Britischen Museums (Cicindelidae, Col.). *Koleopterologische Rundschau* 56: 59–73.
- Matalin AV, Wiesner J (2023) Revision of the *Therates fruhstorferi* complex (Coleoptera, Cicindelidae). *Zootaxa* 5256(5): 401–433. <https://doi.org/10.11646/zootaxa.5256.5.1>
- Matalin AV, Wiesner J, Xiong XX, Araki T (2024) Revision of the genus *Apterodela* Rivalier, 1950 (Coleoptera, Cicindelidae). *Zootaxa* 5405(3): 301–353. <https://doi.org/10.11646/zootaxa.5405.3.1>
- Morawitz A (1863) Vorläufige Diagnosen neuer Coleopteren aus Südost-Sibirien. *Bulletin de l'Académie Impériale des Sciences de St.-Petersbourg* 5: 231–265.
- Motschulsky V (1859) Catalogue des insectes rapportés des environs du fleuve Amour, depuis la Schilka jusqu'à Nikolaevsk, examinés et énumérés. *Bulletin de la Société Impériale des Naturalistes de Moscou* 32(4): 487–507.
- Naviaux R (1991a) Diagnose de deux *Neocollyris* nouveaux (Col. Cicindelidae). *Bulletin de la Société Entomologique de France* 96(3): 222. <https://doi.org/10.3406/bsef.1991.17715>
- Naviaux R (1991b) Nouvelles espèces du genre *Neocollyris* Horn (Col. Cicindelidae). *Bulletin de la Société Entomologique de France* 96(3): 275–282. <https://doi.org/10.3406/bsef.1991.17727>
- Naviaux R (1991c) Les cicindèles de Thaïlande, étude faunistique (Coleoptera, Cicindelidae). *Bulletin Mensuel de la Société Linneenne de Lyon* 60(7): 209–288. <https://doi.org/10.3406/linly.1991.10944>
- Naviaux R (1995) Les *Collyris* (Coleoptera Cicindelidae), Révision des genres et description de nouveaux taxons. *Bulletin mensuel de la Société linnéenne de Lyon, Separatum*: 1–332.
- Naviaux R (2004) Les *Collyris* (Coleoptera Cicindelidae), Complément à la “Révision du genre *Collyris* (sensu lato)” et description de nouveaux taxons. *Bulletin Mensuel de la Société Linneenne de Lyon* 73(3): 55–142. <https://doi.org/10.3406/linly.2004.13506>

- Naviaux R (2010) Espèces nouvelles des genres *Neocollyris* Horn, 1901, et *Collyris* Fabricius, 1801 (Coleoptera, Cicindelidae). Bulletin de la Société entomologique de France 115(3): 311–324. <https://doi.org/10.3406/bsef.2010.2689>
- Naviaux R, Sawada H (1992) Un *Neocollyris* intéressant du Vietnam: *N. mouhoti nagaii* n. ssp. (Coleoptera Cicindelidae). Bulletin Mensuel de la Societe Linneenne de Lyon 61(2): 46–48. <https://doi.org/10.3406/linly.1992.10970>
- Pearson DL, Vogler AP (2001) Tiger Beetles: the Evolution, Ecology and Diversity of the Cicindelids. Cornell University Press, Ithaca, 333 pp.
- Pearson DL, Wiesner J (2023) The use of tiger beetles (Coleoptera: Cicindelidae) in adapting hotspot conservation to global, regional, and local scales. Journal of Insect Conservation 27(1): 19–48. <https://doi.org/10.1007/s10841-022-00411-5>
- Shook G, Wiesner J (2006) A list of the tiger beetles of China (Coleoptera: Cincindelidae). Fauna of China 5: 5–26.
- Shook G, Wu XQ (2006) Tiger beetles (Coleoptera: Cicindelidae) of the Red River, Yunnan province, China. Cicindela 38(1–4): 37–46.
- Tan JJ, Mo W, Liang C (1991) A new species of genus *Therates* Latreille from Guizhou province, China (Coleoptera: Cicindelidae). Sinozoologia 5(8): 243–245.
- Tu YJ, Zhang R, Luo XM (2020) *Cosmaodela separata* (Fleutiaux), a new record species of Carabidae in Jiangxi Province. South China Forestry Science 48(5): 68, 78.
- Wang XQ, Fang H, Zhang ZL (2012) Color Atlas of Liaoning Beetles. Liaoning Science and Technology Publishing House, Liaoning, 452 pp.
- Wiesner J (1988) Die Gattung *Therates* Latr. und ihre Arten, 15. Beitrag zur Kenntnis der Cicindelidae (Coleoptera). Mitteilungen der Münchner Entomologischen Gesellschaft 78: 5–107.
- Wiesner J (2015) A new *Therates* species from China (Coleoptera: Carabidae: Cicindelinae). Mitteilungen des Internationalen Entomologischen Vereins 40: 43–47.
- Wiesner J (2016) A new tiger beetle species from China (Coleoptera: Cicindelidae). Entomologische Zeitschrift 126(3): 131–132.
- Wiesner J (2020) Checklist of the Tiger Beetles of the World (2nd edn.). Winterwork, Borsdorf, 540 pp.
- Wiesner J, Geiser M (2016) Faunistic survey of the tiger beetles (Coleoptera, Carabidae, Cicindelinae) of Laos. Entomologica Basiliensia et Collectionis Frey 35: 61–117.
- Wiesner J, Bandinelli A, Matalin AV (2017) Notes on the tiger beetles (Coleoptera: Carabidae: Cicindelinae) of Vietnam. 135. Contribution towards the knowledge of Cicindelinae. Insecta Mundi 0589: 1–131.
- Wu XQ (2011) A revised list of the tiger beetles of China (Coleoptera: Cicindelidae). Cicindela 43(2): 21–43.
- Wu XQ, Shook G (2007) Range extensions, new records, an artificial key and a list of tiger beetles of Yunnan Province, China (Coleoptera: Cicindelidae). Journal of Entomological Research Society 9(2): 31–40.
- Xiong XX, Wiesner J (2022) A new species of *Probstia* Cassola, 2002 from Hainan Island, China (Coleoptera: Cicindelidae). Journal of Tropical Coleopterology 3(1): 83–87. <https://doi.org/10.53716/jtc.3.1.10.2022>
- Yu GY, Wang H (2017) The Beijing Forest Insect Atlas (I). Science Press, Beijing, 416 pp.